



SATURDAY, OCTOBER 17, 1874.

Contributions.

Developing Traffic by Low Rates in England and America.

TO THE EDITOR OF THE RAILROAD GAZETTE:

The Chicago Tribune of 29th September, publishes a letter from Mr. James McHenry to an American railroad manager, whose name is not given, as the communication was apparently intended for personal perusal only. In that letter Mr. McHenry indirectly charges the American managers with want of courage and enterprise, and with ignorance of the axiom that in order to make railroad capital profitable it must be mobilized by means of its rolling stock. My experience does not run so far back as 1865; but if there was a time when railroad managers supinely permitted their cars to lie idle while the immense wheat crops seen from the car windows by Messrs. McHenry and Forbes either because unsalable for want of a market, or were handled exclusively, or in great part, by other means of transportation, then the railroad managers deserve the scathing remarks of Mr. McHenry, and the shareholders deserve to lose their money entrusted to incompetent guardians. Mr. McHenry appears to place no limit to the reduction of rates:—"get traffic; do business; mobilize your enormous capital," are his instructions. Nevertheless, it is evident that there is a limit, a minimum rate, below which business should not be done. It may be difficult to ascertain the limit; it may require courage to experiment with it, especially when the failure of the experiment entails loss of reputation and emolument to the experimenters. Securing by a low rate business which otherwise could not be obtained is good policy, but to quote lower rates than necessary for traffic which must move over your line is to be justified only by peculiar circumstances.* However, the special purpose of the present writing is to notice Mr. McHenry's query as to the difference between the two continents. He says, referring apparently to the remark of a third party, "The objection he makes to the cheap transit business is the usual objection of every railroad manager I have met in America. I should like to know where the important difference is between the United States and Europe which—thinks must be considered in connection with this subject. Men and women in both countries are not materially different; neither do they differ in their wants or wishes."

The views of some of the railroad managers on the question of the difference between the conditions of traffic of the two continents would, I am certain, interest many, if not all, of your readers. From Mr. McHenry's remarks we learn that American managers unanimously assert that the conditions of American traffic differ materially from the conditions of European traffic. Wherein, then, lies the difference? Not having examined this question very thoroughly, it is with some diffidence that I put on paper a few thoughts concerning it, for which rashness my only excuse is that the matter is an important and an interesting one, and that, seeing these footprints, some one may take heart to give us something more worthy.

In using the word Europe, I presume Mr. McHenry had reference more particularly to England, and that the comparison in his mind was between England and the United States. It occurs to me that in making such a comparison we find that,

I. THE ENGLISH PEOPLE MAKE MORE USE OF THEIR RAILWAYS FOR PERSONAL TRANSPORTATION THAN THE AMERICAN PEOPLE DO.

The country served by railways is more thickly settled in England. The families, having remained for many years and through many generations in the same localities, have become entwined by marriages, and their members have acquired a habit of visiting each other frequently, which visits give in short journeys a very large traffic to the railways.

The English middle and lower classes are fond of excursions. During summer they swarm over the railways, going to fairs, races, watering places, etc. On every holiday the dwellers in cities rush into the country to breathe fresh air and feast their eyes on the rich verdure.

II. ENGLISH MANUFACTURES MORE THAN THE UNITED STATES DO.

As the Massachusetts Commissioners remark in their second report, manufacturing communities always make more use of their railroads than any other.

III. THE DISTANCES OVER WHICH IT IS NECESSARY TO TRANSPORT THE TRAFFIC ARE MUCH SHORTER IN ENGLAND, THEREFORE THE TRANSPORTATION TAX IS LIGHTER ON EACH ARTICLE.

The lighter the transportation tax on each article the more prosperous the people will be; their prosperity extends to the railways. When the transportation tax is very light, manufactures are not confined to certain localities. All places are able to compete on favorable terms, and the factories being spread over the country the volume of traffic in raw material and manufactured articles on the railways is increased and carries with it a considerable passenger traffic.†

* This view is from the standpoint of individual proprietorship and necessarily differs from that of the patriot or the statesman. One of the best arguments, if indeed it is not an overwhelming one, in favor of State vs. individual proprietorship is that the State, never growing old and taking no note of time, can afford to forego immediate results when by doing so it secures a greater though more remote gain, and also that the State, loving all its members equally, seeks to act in such a way as shall confer the greatest good upon the greatest number of its subjects; therefore tariffs could be so framed as to make the burden of taxation lie where it can best be borne, to do which it might be necessary in some parts of the State to carry traffic at cost or even below it.

IV. THE RAILWAY TRAFFIC OF ENGLAND IS MORE EVENLY DISTRIBUTED, THUS REDUCING THE EMPTY MILEAGE, WHICH IN THE UNITED STATES FIGURES FORMIDABLY.

This is merely the result of the more even distribution of the population and of the manufactories.

V. IN ENGLAND THERE IS A GREATER NUMBER IN PROPORTION TO POPULATION OF PEOPLE OF MODERATE MEANS, SATISFIED WITH A MODERATE PROFIT AND INCOME, WHO ENGAGE IN BUSINESS OF ONE KIND OR ANOTHER NOT SO MUCH WITH A VIEW TO MAKING A FORTUNE AS TO INCREASE THEIR INCOMES TO A MORE COMFORTABLE FIGURE.

With such a class of customers industries can be created and new traffic developed, which under other circumstances could not exist. This business must consist almost entirely of articles of luxury.

VI. IN ENGLAND THE PASSENGER RECEIPTS FORM A GREATER PORTION OF THE GROSS INCOME THAN THEY DO IN THE UNITED STATES.

The railway returns for the United Kingdom in 1873 give the total receipts from traffic at \$278,877,105, of which the passenger receipts were \$119,269,460, or 43.1 per cent. In the same year, according to the report of the Pennsylvania Railroad Company, the traffic receipts of the Pennsylvania road were \$24,616,755, of which the passengers, mail and express, contributed only \$5,008,200, or 20.34 per cent., and the Lake Shore gross earnings were \$19,414,509, while the passenger, mail and express receipts amounted only to \$5,121,682, or 26.4 per cent. This difference in the proportion of the two divisions of traffic is a very important one, and becomes more important when viewed in connection with the relation of passenger revenue to gross expenditure. In England for 1873 the total working expenditure amounted to \$153,764,240, while the "coaching" receipts, as given above, were \$119,269,460, thus showing that the passenger traffic alone was 77.56 per cent. or almost equal to the entire expenditure. Under such circumstances, the English railways can afford to carry freight at low figures and to adopt tentative rates, but in America, the passenger traffic, it is said, barely pays its own cost, at any rate it produces a very small sum in proportion to the total of working expenses; for example: In 1873 the Pennsylvania Railroad expenses were \$15,440,905, while the passenger earnings were only \$5,008,200 or 32.43 per cent. The Lake Shore passenger earnings were \$5,121,682 to \$13,288,004, or 38.54 per cent.

When the earnings of one class of traffic are sufficient to pay the expenses of a road, but little courage is required to experiment with the other class, especially when an increased volume of business of that class, although it may produce directly less than the former quantity at the higher rate, adds to the traffic of this class. An increase in the quantity of business done by a community necessitates an increase in the quantity of travelling done by its members. No doubt, *vice versa*, facilities for personal transportation have an effect on business and that the more easily and the more economically the members of a community can rush from one place to another, the more business they are enabled to do.

In submitting the foregoing propositions I do not assert their infallibility. My conclusions may be wrong. Sufficient reliable data are not at hand. There may be and probably are important differences here overlooked. The differences pointed out may not be worthy of the importance I attach to them, and may not be such as to call for any difference in the principles of management of the two countries.

HINDOO.

October 10, 1874.

P. S. I have not said anything regarding water competition or climate, as my investigations concerning the former have not given me a clear idea of the difference between the two countries in that respect. In both there is considerable competition between water and rail. In one the competition is perennial; in the other, only for a season. As regards climate, although rigorous climate may increase the cost of operating, I do not see that it affects principles of management.

[We cannot refrain from calling attention here to still another difference, of quite as much importance as any other, which is that, according to all the information accessible, British railroads charge more for the same service than American railroads with a similar bulk of traffic. American railroads need fear no comparison with English roads so far as tariffs are concerned. The only way in which an unfavorable result is produced is by comparing our first-class with English third-class passenger rates, or rates on American border railroads with those of English roads through a country swarming with people. Whether it would not pay to have a cheap second-class passenger rate with strictly second-class accommodations on many roads in this country may not be a settled question; but the experience of our companies so far is that a second class does not

† In the last twelve years the receipts from freight have doubled on the English railways, but analyzing them we find that the revenue from mineral traffic has more than doubled, while that from general merchandise and live stock has not increased in the same proportion. The figures are as follows:

Mineral receipts have increased from 20 million dollars to 45.
General merchandise " " 38½ " " 60.
Live stock " " 2½ " " 4½.

‡ The relative proportions of traffic on some of the principal railways can be seen by the following table:

	London & North-western.	Great Western.	Great Northern.	Great Eastern.
Total traffic receipts...	\$5,767,719	\$5,451,575	\$2,808,877	\$2,402,213
Total passenger receipts...	3,697,590	2,364,747	1,158,743	1,184,571
Total expenditure.....	4,586,955	2,677,010	1,512,829	1,477,323

Under the head of passenger, or, as it is called in England, "coaching" traffic, are included the various items that in this country are handled by the express companies, and also such carriages and horses as are transported by passenger trains, a business that is not done in this country to any extent.

pay, and some which sell second-class tickets put the holders in first-class cars when there is no room in the smoking car, because there are not enough of them to justify running a separate car. This doubtless is due to the very common and very foolish feeling among us that when we are away from home we must appear to be as rich as any one else; but perhaps with a second-class rate low enough a large addition would be made to the bulk and some addition to the profit of passenger traffic. So far as freight traffic is concerned, and most passenger traffic, American railroad managers have had abundant experience in making low rates for the purpose of developing traffic, and most of our railroads at this day carry a very large traffic at less than the average cost of carriage—a perfectly sound policy, by the way, and one in which the soundest judgment can be profitably exercised.—EDITOR RAILROAD GAZETTE.]

A Wooden Railroad in Michigan.

Office of Van Ertten, Kaiser & Co., Manufacturers of Rough and Dressed Pine Lumber and Lath.

PINCENNING, Bay Co., Mich., October 6, 1874.

TO THE EDITOR OF THE RAILROAD GAZETTE:

Our tram road is 11 miles long and is built in the following manner:

There are first logs laid crossways about five or six feet apart. The logs are from 12 to 16 feet in length. Then gains are cut in the logs and flatted timber laid in these gains; this prevents the road from spreading. Our rails are of hard maple. Before spiking the rails down we put ties across the stringer, notching the stringer enough to let the tie down even with the top of stringer and spike the tie fast before the rail is laid on. The ties are of 2-inch hemlock plank from 6 to 12 inches wide; this prevents the stringer from rolling.

We would recommend any one who wishes to build a road on the above system to build it as straight as possible. We have some curves in our road, and we have been obliged to dispense with wooden rails on the curves and lay down iron.

We operate our road with locomotive power. Cost of building without rolling stock is about \$2,000 per mile.

The stringers are made from elm, oak, pine and ash, and are flatted on two sides to 10 inches in thickness.

Any further information you may wish for we will cheerfully furnish.

VAN ERTTEN, KAISER & CO.

Wooden Railroads—An Inquiry.

KEOSAUQUA, IOWA, October 5, 1875.

TO THE EDITOR OF THE RAILROAD GAZETTE:

Will you give through the GAZETTE your opinion of the value of wooden railroads? How would they work as short feeders to longer roads? Could a freight car with ordinary truck-wheels, weighing when loaded twenty tons, be used to any advantage on wooden rails? Perhaps the experience of some of your correspondents would be of interest on this subject.

W.

Turn-Tables and their Use.

PHILADELPHIA, October 10, 1874.

TO THE EDITOR OF THE RAILROAD GAZETTE:

In your issue of 5th ultimo we notice, in your "Catechism of the Locomotive," allusion to our cast-iron turn table. You figure the centre-box with its attachment for turning by gearing, as it is shown in our illustrated circular. We beg leave to call your attention to the fact that while we show a convenient system of gearing for turning, yet we advise strongly against the employment of any means of turning other than by a push-bar at the periphery of the table.

Very few of our tables have been fitted with gearing, and even those so arranged would, in our opinion, have been better without it. In these tables the entire weight of the table, with the engine and tender to be turned, rests on the center, the wheels at the outer ends of the arms being intended to take the tip of the table and support the ends when the engine is being run on.

It would be well for you in your "Catechism" to call attention to the reason why tables are made of various diameters, thus, 30, 40, 50, 54, 56 and 60 feet diameter. The tables should be of such a diameter or length across the center as will enable the class of engine in use on any road to be balanced. With light engines the fifty-foot table is large enough; with the long, heavy engine used now on the great trunk lines, the engine and tender quite fill up the entire length of 50 feet, leaving no margin for adjustment. In such cases, the 54 feet, 56 feet, or, better, the 60 feet, should be employed. These large tables are also made heavier in proportion. The table should be of such a length that engines, with tender either empty or full, when run on the table can be so placed as to bring the center of gravity immediately over the center. When so balanced, one man can turn the loaded table with ease.

To meet the requirements of roads using heavy engines and having pits of 50 feet diameter which cannot be readily altered, we have constructed what we term our "extra heavy 50 feet turn-table." These are being placed in the pits on main lines, and the old tables, which are quite strong enough for ordinary engines, are being moved to the branch roads.

In setting up turn-tables it is necessary that the foundation at center upon which the pivot rests should be of the most substantial character, so as not to be liable to settle. The circular track, which may be made of light rails, say 28 or 30 lbs. to the yard, should be level, and the table should be so adjusted as to swing clear of the circular track when loaded. The pit required is quite shallow near the edge and deepens towards the centre. Provision is made for covering the entire pit by a platform turning with the table, but this should be avoided whenever possible, as the best constructed cover does

offer some resistance in turning. Even in roundhouses, where a covered pit might be considered preferable as presenting a smooth floor for crossing in any direction, it has been found advisable, in view of the greater ease in turning and the facility offered by the open pit for cleaning, to dispense with the cover. The center upon which the table turns is constructed of the best cast steel, and consists of circular rollers of steel between two steel plates grooved out to receive these rollers. This part of the table must be kept clean and well oiled, say with best sperm or lard oil and tallow of such a consistency as not to harden in cold weather. The top cap at center is held in place by a circle of bolts. These bolts take the entire weight of the table and load; by slackening off the bolts the table can be lowered on the wheels on the circular track and the cap lifted off to gain access to the plates and rollers. These should be opened, examined and cleaned at least once every three months.

Under the cap and between it and the top of center box are segments of wood. These can be altered in thickness to bring the table in proper adjustment. If the center foundation settles, these segments should be thinned sufficiently to enable the table to be screwed up to a proper height. With proper care these tables are practically indestructible.

It may be well to note that the width of the cast-iron turntable has nothing to do with the gauge of the road. Cross-ties rest on the arms, and upon these cross-ties any required width of track may be laid.

Begging you will make these remarks public and embody such as you may see fit in your "Catechism," we remain,
Yours respectfully, WM. SELLERS & CO.

Train Accidents in September.

Very early on the morning of the 1st, the engine and two baggage cars of a train on the Missouri, Kansas & Texas road were thrown from the track by a misplaced switch near Hannibal, Mo. The switch is said to have been purposely changed.

On the morning of the 1st, near Grafton, O., on the Cleveland, Columbus, Cincinnati & Indianapolis road, an extra freight ran into the rear of a regular freight which was ahead, wrecking several cars and killing the conductor. There was a dense fog at the time.

Early on the morning of the 1st, a switching engine of the Chicago & Northwestern road ran through the open draw of the Kinnickinnick bridge at Milwaukee and went into the river. There was a heavy fog at the time.

On the morning of the 1st, on the St. Paul & Pacific road, near St. Albans, Minn., two cars of a passenger train were thrown from the track by a broken rail, and rolled over into the ditch on their sides, injuring five passengers.

On the afternoon of the 1st, there was a collision between two freight trains on the Cleveland, Columbus, Cincinnati & Indianapolis road near Wellington, O., by which several cars were wrecked, the conductor killed and a brakeman injured.

On the 1st, an express train on the Detroit and Bay City road was thrown from the track by a fallen tree near Vassar, Mich., the engine and four cars going into the ditch.

About 8 o'clock on the evening of the 1st, an express train on the New York, New Haven & Hartford road ran into the rear of a way train which was stopping at Mount Vernon, N. Y., wrecking three cars of the way and two of the express, injuring the engine man and fireman of the express and the conductor and three passengers of the way. The way train had been losing time owing to the bad steaming of the engine, but the cause of the collision seems to have been the want of proper station signals, or of the failure to use them.

On the night of the 1st, an east-bound passenger train on the Hannibal & St. Joseph road was thrown from the track at Brookfield, Mo., by a misplaced switch and delayed five hours. The switch bar had been broken and the switch set wrong, leaving the target set right for the train.

On the 2d, several cars of a construction train on the Lake Ontario Shore road were thrown from the track near Crockett's, N. Y., injuring one man.

On the 2d, there was a rear collision between two freight trains on the New York Central & Hudson River near Oneida, N. Y., by which two cars were wrecked.

On the 2d, there was a butting collision between two freight trains on the Vermont Central road near Claremont, N. H., by which both locomotives and 14 cars were wrecked.

On the morning of the 3d eight cars of a mixed train on the Chicago, Milwaukee & St. Paul Railway were thrown from the track near Schwartzburg, Wis.

On the morning of the 3d, on the Chicago & Northwestern Railway in Chicago, the boiler of an engine exploded, tearing the boiler to pieces and injuring the fireman and a man who was standing near. The engine was about eight years old and is said to have had about 90 pounds of steam on and plenty of water in the boiler.

About noon on the 3d the tender and baggage car of a way train on the Philadelphia & Reading road were thrown from the track and wrecked at Mount Carbon, Pa., by the breaking of a switch-bar.

On the night of the 3d, at Blunt, Ill., on the Chicago & Iowa Railroad, a freight train having broken in two the rear section ran into the forward one with such force as to break the draw-bars of eight or ten cars.

On the morning of the 4th, at Linton, Ia., on the Burlington, Cedar Rapids & Minnesota, five cars of a freight train were thrown from the track by a broken switch bar and wrecked, injuring a brakeman.

On the morning of the 5th, on the Memphis & Little Rock road, near Hopefield, Ark., the engine of a passenger train jumped the track at a curve and was badly wrecked, injuring the engine man and fireman.

On the afternoon of the 5th, an express train on the New York Central & Hudson River was thrown from the track near Spuyten Duyvil, N. Y., by the slipping of a switch out of place. The switch was a new patent which had just been put in use at that place.

On the night of the 6th, a freight train on the New York Central & Hudson River was thrown from the track near Syracuse, N. Y.

On the morning of the 8th, there was a butting collision between two freight trains on the Grand Trunk Railway near Danville Junction, Me., by which both engines and several cars were wrecked and the road blocked for over a day.

On the 8th, a mixed train on the Kansas Pacific road ran over some cattle near Reno, Kan., on the Leavenworth Branch, throwing the engine and several cars from the track.

On the 10th, a freight train ran off the track on the Cincinnati, Lafayette & Chicago road, blocking the road some hours.

About 9 o'clock on the evening of the 10th, when a south bound emigrant train on the New York Division of the Pennsylvania Railroad was near Plainboro, N. J., an axle broke under an Adams' Express car, throwing five cars from the track, damaging four of them and completely wrecking the fifth. One track was blocked two hours.

On the night of the 10th, a train on the Atchafalaya & Nebraska road ran over a misplaced switch at Troy Junction, Kan., and the engine and five cars went into the ditch.

On the evening of the 11th, near Kansas City, Mo., on the Hannibal & St. Joseph road, a long stock train was stopped to avoid running over a mule, and was pulled up so suddenly that six cars were thrown into the ditch, injuring a driver badly.

Late on the night of the 11th, a car in a freight train of the Erie Railway caught fire near Middletown, N. Y., and was destroyed. The car contained some fancy cattle valued at \$15,000, which were on their way to the New York State Fair at Rochester.

Very early on the morning of the 12th, as a Central Pacific freight train was running down the wharf at Oakland, Cal., it ran over a misplaced switch and into a caboose which was standing on a siding, smashing the caboose, killing two men and injuring a third.

Very early on the morning of the 12th, an east-bound freight train on the Central Pacific broke in two near Truckee, Nev., and the forward portion being halted the rear end ran into it, wrecking several cars. The train was loaded with tea.

On the morning of the 12th, the engine of an express train on the New York Central & Hudson River ran off the track near Cruger's, N. Y., and ran some 200 yards on the ties, when the tender upset.

On the 12th, three cars of a freight train on the Central Pacific were thrown from the track near Colfax, Cal., by a stick of wood which had dropped from the tender.

On the afternoon of the 12th, as a Grand Trunk transfer train was running through Buffalo, N. Y., the engine struck a door which had fallen from a car of a freight train which had just passed on the other track, and the engine, baggage car and one passenger car went off the track and were wrecked.

On the evening of the 12th, there was a collision between two freight trains on the Harlem Extension road at North Bennington, Vt., by which an engine and two cars were badly wrecked. It was caused by a misplaced switch.

On the morning of the 14th, on the New York Central & Hudson River, there was a butting collision between two engines in the Syracuse yard.

On the afternoon of the 14th, a gondola car loaded with coal broke loose from a train on the Baltimore & Ohio road in Baltimore, and ran back some distance and into another coal train, throwing six hopper cars from the track.

On the night of the 14th, a freight train on the Utica & Black River road ran off the track near Remsen, N. Y.

Early on the morning of the 15th, as a coke train on the Pittsburgh, Washington & Baltimore Railroad was coming down a grade 18 miles west of Cumberland, Md., it ran into the rear of a preceding coal train, wrecking its own engine and several cars of the coal train. The engine left the track, went down the bank and upset. The engine man, fireman, a brakeman and two men who were stealing a ride were badly injured. A car went down the bank, rolled over several times and struck against the side of a house, frightening a woman so that she afterwards died.

About noon on the 15th, there was a collision between an east-bound express and a freight train in the Harrisburg yard of the Pennsylvania Railroad by which three persons were injured and several cars wrecked. The collision was caused by a misplaced switch.

On the 15th, a Pullman car on a train on the Detroit & Bay City road caught fire when the train was near Rochester, Mich., and was entirely destroyed except the trucks.

Early on the morning of the 16th, as two extra trains having a circus on board, were coming east on the Chesapeake & Ohio road, the first stopped at a siding near Staunton, Va., and a few minutes afterwards the second train ran into it, wrecking several cars and killing a fireman. A flag was sent back by the first train but was not seen by the second.

On the 16th, a mixed train was thrown from the track of the Chicago & Lake Huron road near Olivet, Mich., at a place where the fastening of a rail had been removed and the rail left lying loose in the track. The engine and four cars went into the ditch.

On the 16th, a way freight train on the New York & Oswego Midland ran off the track near Liberty, N. Y., blocking the road four hours.

On the afternoon of the 16th, a locomotive of the Delaware, Lackawanna & Western Railroad ran off the turntable in Utica, N. Y.

Early on the morning of the 17th, a passenger train on the Missouri, Kansas & Texas struck a car which had been run on the side track at Pleasant Green, Mo., and left so that one end projected over on the main track. The engine was disabled and the train delayed some time.

On the morning of the 17th, between Fairmont and Exeter, Neb., on the Burlington & Missouri River Railroad, a frightened horse ran between the cars of a passenger train in motion, and threw seven cars from the track.

On the afternoon of the 17th, as a train on the Decatur Branch of the Indianapolis, Bloomington & Western was starting out from Decatur, Ill., it struck a loose frog and the engine was thrown from the track and badly injured.

On the evening of the 17th, a west-bound express train on the New York Central & Hudson River was thrown from the track at Yost's, N. Y., by a broken switch bar.

On the night of the 17th, the second section of a stock train on the Pennsylvania Railroad ran into the first section near Blairsville Intersection, Pa., wrecking a caboose and injuring a driver.

Very early on the morning of the 18th, an east-bound freight train on the Erie Railway ran into a large stone which had fallen on the track at Carr's Rock on the Delaware Division, and the locomotive and four cars were thrown from the track and wrecked.

On the morning of the 18th, as a train on the Mississippi Railroad was entering St. Albans, Vt., it ran into some cars which a switching engine had left standing on the main track, wrecking one car.

On the morning of the 18th, on the Wilmington, Columbia & Augusta road, near Columbia, S. C., 16 cars of a freight train were thrown from the track by a broken rail.

On the evening of the 18th, as a Lake Shore train was crossing the New York Central & Hudson River track to enter the new transfer depot in East Buffalo, N. Y., a Central train coming up at a pretty rapid rate ran into the rear car, throwing it from the track. Two passengers, who were standing on the platform, were thrown from the car and killed.

On the evening of the 18th, a freight train on the Illinois Central ran into a heap of sand that had been washed across the track by a heavy rain, near Dunleith, Ill. The engine and several cars were thrown from the track and wrecked, the engine man and fireman badly hurt, and a brakeman killed.

On the night of the 18th, a freight train on the Jackson, Lansing & Saginaw was thrown from the track at Leslie, Mich., by a misplaced switch, and struck and killed a man who was standing by the track.

On the morning of the 19th, near New Market, Mo., on the Atchafalaya Branch of the Chicago, Rock Island & Pacific road, a trestle bridge over a ravine gave way and 14 freight cars went down, leaving the engine and one car on one side and three cars on the other side of the bridge.

On the morning of the 19th, on the Erie Railway at the depot in Paterson, N. J., an engine was thrown from the track by a misplaced switch, blocking one track for some time.

On the night of the 19th three cars of a freight train on the Northern Railroad of New Hampshire were thrown from the track and badly wrecked by a broken wheel near Franklin, N. H. The road was blocked three hours.

Very early on the morning of the 20th there was a collision between two freight trains on the Harsimus Cove Branch of

the Pennsylvania Railroad in Jersey City, by which a brakeman was badly hurt.

Very early on the morning of the 20th a train on the Lake Shore & Michigan Southern Railway was thrown from the track by a misplaced switch near the transfer depot in East Buffalo, N. Y., causing a delay of an hour and a half.

On the evening of the 20th, on the South & North Alabama road, near Blount Springs, Ala., a freight train was thrown from the track by an obstruction placed across the rails for that purpose and the engine and three cars were wrecked, injuring the engine man and fireman.

On the 21st, as the first section of a freight train on the Pittsburgh, Cincinnati & St. Louis road was going up a grade two miles east of Richmond, Ind., several cars broke loose from the rear of the train and ran backwards down the grade and into the head of the second section, which was about a mile behind. The engine and several cars were badly wrecked.

On the morning of the 22d, on the Boston & Albany road near Brighton, Mass., a gravel train ran into a drove of cattle, throwing 21 cars from the track and blocking the road three hours.

On the morning of the 22d, the boiler of the engine of a gravel train on the Portland & Ogdensburg road exploded near Stroudwater Bridge, Me., killing the engine man and injuring three others who were on the engine.

About noon on the 22d, near Delhi, Mich., some cars broke loose from a west-bound freight train on the Michigan Central road. No signal was sent out from the detached cars and they were run into shortly afterwards by a construction train which was following the freight, wrecking several cars and injuring five men, one of them so that he died shortly afterwards.

On the 22d, a freight train on the Southwestern Branch of the Chicago, Rock Island & Pacific was thrown from the track near Gallatin, Mo., blocking the road seven hours.

On the 22d, the engine of an east-bound passenger train on the Chicago, Burlington & Quincy Railroad ran off the track at Galesburg, Ill., and was disabled.

About 2 o'clock on the afternoon of the 22d, a south-bound passenger train on the Belvidere Division of the Pennsylvania Railroad ran over a misplaced switch and into the head of a freight train which was standing on a siding at Warner's, three miles from Phillipsburg, N. J. The engines were badly damaged and the baggage and smoking cars telescoped, killing one man and injuring 10 others.

On the 23d some carpenters working on the Central Pacific snow sheds near Emigrant Gap, cut a car loaded with lumber loose from a train, intending to let it run down grade to the place where they wanted it. The car was running at a high speed when the brakes were put on and they refused to hold, and after running about a mile the car jumped the track and knocked down nearly 200 feet of shed killing one man and injuring three others.

On the evening of the 23d, a local freight train on the Boston & Albany road stopped between Westboro and Southville, Mass., without sending back a flagman, and a few minutes after another train ran into the rear of the first, wrecking an engine and four cars.

On the night of the 23d, as a Toledo, Peoria & Warsaw train was standing on the track at Chatsworth, Ill., a freight train belonging to the Illinois Central road (some of whose trains use the Toledo, Peoria & Warsaw track from El Paso to Gilman), ran into its rear, badly wrecking the caboose and several cars and the Illinois Central engine and injuring four persons. The men on the Toledo, Peoria & Warsaw train claim that they had the proper signals out.

Early on the morning of the 24th, as a train on the Selma, Rome & Dalton Railroad was crossing the bridge over Wash-hatchie Creek, near Shelby Springs, Ala., the bridge gave way and the whole train, consisting of engine, three freight, one baggage and two passenger cars, fell into the creek, 55 feet below, several of the cars turning over twice before reaching the ground. Four persons were killed, 12 dangerously and 9 less seriously injured. The bridge was a wooden Howe-truss deck bridge of 110 feet span, resting on stone piers, and the track was 55 feet above the water. It had been built about a year and inspected only a few days before.

About 6 o'clock on the morning of the 24th a freight train on the New York Division of the Pennsylvania Railroad ran off the track near Hackensack Bridge, N. J., blocking the track some time. A brakeman was severely injured.

On the morning of the 24th, on the Marquette, Houghton & Ontonagon road, at Carp Hill, Mich., as an ore train was going up a grade, it broke in two and the rear cars ran back some distance and into the head of another train which was following, wrecking a number of cars and badly damaging the engine. The engine man of the second train, seeing the cars coming, reversed his engine so suddenly that the cars mounted the tender, wrecking that.

About noon on the 24th a mixed train on the Mine Hill Branch of the Philadelphia & Reading ran into the rear of a coal train near Tremont, Pa., wrecking a coal car and slightly damaging the engine of the mixed train.

On the afternoon of the 24th as the first section of a south-bound freight train on the Vermont Central road was stopping at North Georgia, Vt., for wood, the second section ran into its rear, wrecking two cars of the first and the engine and several cars of the second train. It does not appear that the first train had any signals out.

On the 24th, on the Houston & Texas Central road, near Hempstead, Tex., a freight train ran into two bulls which were fighting on the track, throwing off the engine and 10 cars, most of them being badly wrecked.

On the evening of the 24th, an east-bound express train on the Baltimore & Ohio road ran into the head of a west-bound train which was just going on a siding at Smithton, W. Va. Both engines were wrecked, and the postal car of the west-bound train, catching fire from an overturned lamp, was burned, together with the baggage car. A clerk on the postal car was burned to death.

On the 25th, a special train on the Toronto, Grey & Bruce road ran over a cow near Orangeville, Ont., and the engine and five cars were thrown from the track and upset, killing the fireman.

On the morning of the 26th, a freight train on the Missouri Pacific road went through the bridge over the Osage River, the engine and six cars going down with one span of the bridge. The fireman was badly hurt. The bridge was of iron and had been standing three years.

About one o'clock on the afternoon of the 26th, a north-bound mail train on the New Orleans, St. Louis & Chicago road was thrown from the track near Holly Springs, Miss., at a place where an embankment had been washed out by a heavy rain. The train went down a bank 30 feet, two cars turning over twice, and 12 persons were injured.

On the night of the 27th, an east-bound stock train on the Kansas Pacific road ran over a bull near Manhattan, Kan., and the engine and nine cars were thrown from the track, the engine being upset and the cars badly wrecked. The fireman jumped and fell on the track, three cars passing over him and injuring him so that he died in a short time.

On the evening of the 28th, the boiler of a locomotive exploded while it was standing in the Erie yard at Port Jervis, N. Y., waiting to go out with a train. The break in the boiler took place immediately over the firebox, the outer crown sheet being torn to pieces and some of the fragments thrown a great distance. The engine man states that the steam-pressure at the time was 100 pounds, and there was plenty of water. The fireman and a boy were killed and the engine man injured. The engine was a mogul, with very long firebox, made for burning hard coal, and was built in Paterson in 1865.



Published Every Saturday.

CONDUCTED BY

S. WRIGHT DUNNING AND M. N. FORNEY.

CONTENTS

CONTRIBUTIONS:	Page	Page
Developing Traffic by Low Rates in England and America.....	401	Traffic and Earnings.....
A Wooden Railroad in Michigan.....	401	The Scrap Heap.....
Wooden Railroads—An Inquiry.....	401	Old and New Roads.....
Turn-Tables and Their Use.....	401	Annual Reports.....
EDITORIALS:		Miscellaneous:
The Waste by Useless Railroads.....	404	Train Accidents in September.....
Railroad Tribunals.....	406	Maintenance of Road—"Specifications for a Perfect Sub-Division".....
The Profits of Wisconsin Railroad Investors.....	405	The Western Railroad Bureau.....
Greater Activity in Traffic.....	405	The Rapid Transit Committee.....
Record of New Railroad Construction.....	406	Legitimate Regulation of Railroads.....
EDITORIAL NOTES.....	406	Railroad Finances and Defaults.....
GENERAL RAILROAD NEWS:		Locomotive Returns, May, 1874.....
Personal.....	406	
Elections and Appointments.....	406	

Editorial Announcements.

Addresses.—Business letters should be addressed and drafts made payable to THE RAILROAD GAZETTE. Communications for the attention of the Editors should be addressed EDITOR RAILROAD GAZETTE.

Contributions.—Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies, the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and in their management, particulars as to the business of railroads, and suggestions as to its improvement. Discussions of subjects pertaining to ALL DEPARTMENTS of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections, appointments, and especially annual reports, some notice of all of which will be published.

Advertisements.—We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay, EXCEPT IN THE ADVERTISING COLUMNS. We give in our editorial columns OUR OWN opinions, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.

THE WASTE BY USELESS RAILROADS.

The tables of railroad bonds the interest on which is not paid, which we copy from the *Commercial and Financial Chronicle*, furnish material for a study into the character and peculiarities of this vast bankruptcy of carrying companies, of which we purpose to make some use. Several months ago we called attention to the fact that the failures are confined chiefly to the newer roads, mostly to those constructed within the past six years. While the aggregate of the bonds in default is nearly five hundred millions (\$497,807,680), we find but \$78,000,000 of it, a little more than 15 per cent., to be issues of the older roads. The failures then have been chiefly of lines built during those years of extraordinary and we must say extravagant activity in railroad construction beginning with 1868, during which we added 31,400 miles of lines to our railroad system, increasing it by 80 per cent., the population meanwhile having grown probably not more than 16 per cent. Of course it was impossible that this growth in railroad construction could continue indefinitely. It was absorbing the wealth of the world, and the growth of production in our most prosperous days even could not keep pace with it. But the enormous expenditure on these works, which was very largely of foreign capital, gave an impulse to most American and many foreign industries, and especially to the iron industry the world over, which was driven to the utmost to supply the demand, became enormously profitable, and in this country was so extended that when the panic came last year there were blast furnaces enough erected (though not in blast; many of them probably never will be) to produce more iron than we had used even in the year of the greatest railroad extension. Railroad construction before the end of 1873 had become really a leading national industry, absorbing the efforts of a vast army of workmen and their managers and a large capital in the mere appliances for construction. No wonder, then, that the sudden cessation of this activity should have affected profoundly the general current of business throughout the country. We have had to some degree a repetition of the experience of the war, when the vast expenditures of money for unproductive purposes gave in the North an impetus to business which caused the war to appear to many like a great creator instead of a destroyer of wealth.

But the locality of these defaulting railroads is more suggestive than the time of their construction. It is generally said that the capital invested in these railroads

is lost in scarcely any case, but simply temporarily rendered unproductive to the investor; that to the community there is not even this temporary loss, but that the new roads have rendered available a vast territory of fertile land whose products are adding to the national wealth several times as much as the interest on the capital invested in the new railroads. That is, when the railroad investors have lost their money, or been deprived of an income on it for the time, the land owners and the farmers have made a great deal more than the railroad owners have lost. The chief basis of this opinion is the assumption that the new railroads are chiefly in the far West, and were constructed to supply means for transportation to districts heretofore wholly destitute. This is far from the truth: not half of the new mileage is even in the newer States, and a still smaller proportion opened new country, for in the new States even a considerable portion of the new railroad mileage simply gave a second or third route for traffic which had one before. Moreover, we believe that the proportion of new roads in default is no larger in the West than in the East, and probably not so large. We have not calculated the mileage of these roads in the different sections, but we have selected from the bonds in default those of roads which may properly be said to open new agricultural districts, and find their aggregate to be a little less than \$158,000,000. Now this sum is less than 32 per cent. of the whole amount in default, and there remains about \$340,000,000 invested in roads which will do little to promote the agricultural wealth of the country, and can be of little advantage as producers of wealth except where they make accessible valuable deposits of minerals, as some of them do.

Nor is it the railroads that fail to pay their debts which alone add little or nothing to the national wealth. It is perfectly feasible and often true that a railroad may make a fair income without really adding to the general stock of wealth. This is the case when the facilities which it gives have not promoted production or rendered it more economical (which is the same thing), but have simply diverted traffic from other routes. If the Pennsylvania or the New York Central Railroad were duplicated, and the new line should have such influence as to divide evenly the traffic of the old one, it might perhaps earn a satisfactory income, but it would be by depriving the older road of a larger amount. It would not cost less nor the same for two roads to do the work which one had done and could do, but much more; and if the community paid no more for carrying, the carriers' profits would be less, so that the capital invested in the new road would be, so far as the community is concerned, worse than wasted: the two roads would do just the work of the old one, but at a greater expenditure of labor.

Now, a considerable number of the new railroads of the United States are really hindrances to the economical conduct of transportation. Most of their traffic would have existed if they had never been constructed, and would have gone to other roads, which, at considerably lower rates, would have made greater profits than they now do. Many a new railroad has succeeded during the few years of its existence in producing these three effects: the ruin of its proprietors; great injury to the property of its competitors, and the maintenance of higher charges for transportation to the community.

We are not often able to see distinctly the effects of a superfluous railroad, because in the first place we do not see its effects as a whole, and in the next place, its worst effect on the community is the prevention of a favorable downward progress in rates. No one blames the Great Parallel Railroad for keeping rates up to three cents per ton per mile, because the rate never was lower, but probably has generally been higher, and people do not see what favorable progress its existence has prevented. Then in looking superficially for the effects of a railroad, our eyes rest upon the industries which have grown up on it, and we hastily conclude that it has created them. But in every country where manufactures are growing, it would be wonderful indeed if some of the new ones should not be planted on the new railroads. If there had been no new railroad, however, in most cases the new manufacture would have existed all the same, only it would have been established on an older railroad. It is only when the new line renders accessible some valuable material which was previously inaccessible and gives it cheaper carriage to a sufficient market that it really adds to the manufacturing industries of a State. This is usually the case when it passes near coal and iron mines and quarries which are valuable enough to work when provided with the new outlet. Now of course there is scarcely any road which does not develop some such source of wealth. If there are enough of them the railroad has justified its existence; but there may be some valuable ones, and yet not enough to warrant the investment in the railroad; for, whether the railroad is profitable to its proprietors or not, in the economy of the nation it is wasteful unless it adds a value greater than its cost, which it may do by lessening the cost of transportation on the same or nearly the same amount of products as was marketed before its existence (which has been, perhaps, the most important

effect of railroads in Europe), or by making profitable production possible where before it was impossible, and so giving an actual value to fields, forests and mines which before had only a remote prospective value (which has been the chief effect of railroads in this country). The effects spring from one cause—the cheapening of transportation—and the difference in manifestation is due simply to the difference between a thickly peopled and an almost undeveloped country.

Generally it is extremely difficult to ascertain with anything like exactness how much any given railroad has added to the capacity for profitable production of the country through which it runs. But there can be no doubt that it adds very little to the capacity for agricultural production of districts which already had outlets within fifteen miles or so. And, though sometimes a great coal traffic may spring up almost immediately, as was the case on the Columbus & Hocking Valley Railroad, usually it is only agricultural or lumber production which grows very rapidly. A railroad through a new prairie country, not too distant from market, with no competitor on either side for twenty miles or more, may very soon develop a large traffic, and add vastly to the wealth of the country, whatever may be its returns to its proprietors. But if it must depend on the growth of manufacturing industries, even when it opens special facilities for them, it usually has to wait many years for an income, and is long in developing any considerable wealth in the country.

Examine the effect of the great number of new railroads constructed in Michigan since the war south of the latitude of Port Huron and Flint. It will be found that they had very little influence on farming. The land was pretty well occupied and cultivated, for this country, before they were built, and the agricultural population is not much greater now. There has been some progress in the area tilled and amount produced, but there was similar progress when there was little or no growth in the railroad system in that district. On the other hand, three or four new railroads further north in the State, penetrating a territory destitute of any facilities for transportation and almost uninhabited before, have developed an immense lumber traffic and attracted a considerable number of farmers; have immensely increased the rate of growth in population and production, and must have added enormously to the wealth of the land-owners there.

The prevailing idea that every railroad is a good thing for the world even if it ruins its owners is a gross and a dangerous error. There is hardly any other way in which capital can be worse used than in a superfluous railroad. As we have shown above, such a road, whether profitable to its owners or not, is virtually a constant tax on the community, unless it is abandoned altogether, by enhancing the actual cost of transportation.

We have called attention to this subject because it is almost a universal practice, in this country at least, to welcome every new railroad as naturally and necessarily a benefit to the community. And there is the more need to urge this view of the matter, because the evil that unnecessary roads do is not evident even after it is fully accomplished, while their good results (and all have some such results, and most even of the least needed railroads have many) are conspicuous. We see that there are half-a-dozen flourishing little towns where formerly was a bare prairie or an uncleared wood ten miles away from the other and larger row of towns on the older railroad, but we do not see that an equal or greater growth of these older towns has been prevented; we see that farmers who formerly spent ten days in the year in marketing their crops now do it in five, but we do not often notice that even the latter time absorbed but a trifle of their productive force, and we do not see at all that one road, if it had all the traffic now divided between two, would be able to carry it at a much lower cost, and so either save money to the shippers or make money for the railroad proprietors. It is evident that some land-owners at and near stations have had the market value of their property greatly increased, but the obstruction to progress caused by the tax on the country for supporting two railroads instead of one is not so readily appreciated. The fact that nearly every railroad—all in the world but a score or so, probably—can be made to accommodate an enormous addition to its traffic by the expenditure of a comparatively trifling addition to its capital, and at a greatly reduced average cost of conducting it, which differentiates railroads from nearly all other kinds of property, is hardly appreciated at all by the great majority of intelligent men, including economists, and is not sufficiently appreciated by any one, we feel like saying.

The chief lesson of all this is that a railroad is not to be rashly planned and executed, not even to be eagerly invited by the community without a careful study of the work it will have to do, and of what we may call the aggregate of its probable effects. It is only the more important of these effects that we have mentioned, and those affecting the production of wealth. But a railroad has a score of desirable effects, some of which do not in any way facilitate production. It may be impossible to say that any given railroad is a disadvantage to a com-

munity when it is easy to believe that the district through which it runs would have been better off with half as many miles of railroad.

Because we have said so much of the waste caused by useless railroads, some may think that we estimate too lightly the value of all railroads. But if we have said little of the latter it has been because it hardly seemed necessary to say anything. The world is of one mind on that subject. Doubtless almost any district can better afford to support three railroads, two of them superfluous, than to go without any. Moreover, we have no doubt that there is still great room for railroad construction, even in the older countries. But they cannot be built hap-hazard, simply to divide the traffic already existing, without causing a great waste of wealth. They should aim to develop new traffic, and that of the kinds which can be developed by such means, according to previous experience in such matters. There should, indeed, be a thorough and minute study of the project, not simply as a construction, but with reference to the nature and sources of the traffic which it will probably command; and if the interests of the community are to be consulted, this study should include the consideration of the eventual effect of the new road on the future cost of transportation on routes with which it may compete, as this effect is often the most important of all to the community served by the carriers, as well as to the proprietors of the various railroads which serve it.

RAILROAD TRIBUNALS.

The report of the first year's work of the new British Railway Commission which we published last week we commend to the attention of our readers. This Commission has few of the functions of our American railroad commissions, but is in reality a court of special qualifications to hear and decide upon a special class of cases requiring technical knowledge of railroad business for their equitable settlement. So while the law establishing this Board requires that one Commissioner shall be learned in the law, it requires likewise that one shall be skilled in railroad management; and Mr. Price, one of these Commissioners, was at the time of his appointment General Manager of one of the most important English railroads, and had spent his life in its service.

The work of the Commission has been chiefly of two kinds: the trial of cases in which it was complained that a railroad company was not fulfilling its duties to the public as a common carrier; and regulating the relations of railroad companies with each other when they could not agree upon the terms on which they should work together.

We believe that the history of this first year of its workings is a sufficient justification of such a tribunal. As a court it has the great advantage of familiarity with the principles of the business to which its decisions relate, that business being one complicated in its nature and not easy to explain. And this advantage does not rest alone with the member of the court who has been engaged in practical railroad work. The court does not so much need to know how railroads are worked as to understand fully the economics of transportation—a knowledge which is to some extent forced upon those railroad officers who make rates, but is by no means common among railroad men. A court whose attention is confined to questions relating to transportation is in almost the best possible position to acquire this science.

And its special knowledge enables it to decide when an ordinary court would refuse to make any order from consciousness of its inability to decide correctly. A court might even be convinced that there was a wrong which ought to be remedied and yet refuse to act because of its inability to discover a proper remedy. We see that a large proportion of the cases brought before the British Commission were settled before the trial was finished, apparently because it became evident that the court could perceive wrongs unintelligible to an ordinary tribunal and would have no hesitation in prescribing a remedy. In fact the mere fact of having such a court to appeal to and the consciousness that it has the ability to decide what are wrong practices in railroad business and has the power to proscribe them are likely of themselves to prevent such practices, and so the existence of the court alone (as of all other efficient courts, indeed) has a tendency to reduce the number of that kind of cases which it was created to try. Since the close of the year covered by the report, the Post-office Department brought complaints against certain Scotch railroads for neglect to provide proper facilities for carrying and handling the mails. There was and could be no dispute as to the pay for the service, for the English law provides that this shall be settled by arbitration when the Department and the railroad company cannot agree. Still it was thought that the companies hoped to make the Department consent to a higher rate of pay than any arbitrators would be likely to award if obstacles to the prompt transportation of the mails were presented. Now the interposition of such obstacles to the conduct of the business of any class of customers is a cardinal sin in railroad

management, which the law should take cognizance of and suppress with all its force; and in the case under consideration, if the reports which we have seen are correct, it soon became evident that the Commission would see that the companies had denied proper facilities, and no sooner had it been decided that the Commission had jurisdiction than the companies came to an agreement with the Department.

The indispensable condition of the efficiency of such a tribunal is, of course, a profound knowledge of the principles governing the transactions with which it deals. A Commission composed of defeated candidates for the last Congress or prospective candidates for the next one, or of gentlemen "fully in sympathy with the people's rebellion against unscrupulous monopolies" would be as much worse than an ordinary court as a committee of the Paris Commune.

Very different from this English Commission, of course, in its organization and purposes, and yet related to it by its judicial treatment of certain transportation problems and its special qualifications therefor, is the new tribunal which the railroad companies themselves have established in this country to establish rates for through traffic between the Northern seaboard cities and Western points, and to settle differences between the companies concerning the methods of soliciting and conducting this traffic. Very few, perhaps none, of the questions which it considers would be legitimate subjects for the English Commission to decide upon; yet they are similar in nature to one of the two great classes of cases which come before the latter tribunal, inasmuch as they are questions between different railroad companies as to their respective rights and duties.

Few branches of business have been in a more unsatisfactory condition, either as regards the railroads or the community, than through railroad traffic between the West and the East for many years past, or probably during the whole time since the completion of the first railroad. The fluctuations in charges have not only been great (they are necessarily considerable), but sudden, violent, and oftenest without any natural cause. A merchant in Chicago has no sooner moved forward his stock of goods from New York at an expense of a dollar and a quarter a hundred, than a quarrel between trunk lines, originating probably in the over-zealous action of some agent, enables the rival merchant across the way to bring forward his stock at fifty cents a hundred. The manufacturer who receives his raw materials and distributes his goods over long through routes is unable to calculate for six months ahead the probable amount of what may be one of the chief expenses of his business. The element of uncertainty thus introduced is unfavorable to all legitimate business. On the whole, doubtless, the community has had the advantage, for the average through rate on west-bound freight has been unduly low. And it has been made so largely by the efforts of companies to fill their empty trains, not by attracting new business by very low rates on materials which otherwise would not move at all, but by trying to divert business from their neighbors, business most of which in the nature of things cannot be increased by any reduction in the price of transportation. Almost every year for a long time there has been a period of some months—sometimes half the year—when the money received for through freight carried West did not nearly pay the cost of moving the trains. It may indeed be impossible to make it do this, but for the benefit of all other traffic it should be made to do so as nearly as possible, at least so far as can be done without reducing the whole volume of freight. It will pay to take coal from Susquehanna to Buffalo or coke from Pittsburgh to Chicago, or stone from any station westward for a mere fraction of the cost of hauling the car, for these materials will not use the railroad at all if they must pay the whole cost of moving the train, which must go west for a load, whether the cars are full or empty. But it will not pay to make any such reduction in the tariff on merchandise, whose movement and consumption will hardly be affected at all by a difference even of half a cent a pound in the cost of transportation.

The history of the attempts at agreements among railroad companies is not very encouraging; but we believe there never was one in which the signs of earnestness were so clear and the preparations for arbitration so carefully and thoroughly made. The two boards of commissioners of themselves testify to the genuineness of the movement and the faith of capable judges in its success. The railroad companies would not engage the services of nine or ten railroad officers of high character and ability, whose capacity has been tested in some of the highest positions on American railroads, unless they had good reason to hope for adequate results from the effort and expense; and the new Commissioners would not have left their former high offices for their new positions if they had not faith in the success and permanency of the arrangement. Certainly they will have an opportunity to do a good work, both for their employers and the community, if the companies will continue to act in harmony.

The Profits of Wisconsin Railroad Investors.

The article from *The Nation* published in another column, which sets forth so well the reasons why, in order to secure the construction of railroads in a new country, it must be at least permissible to make large profits, suggests the inquiry as to how profitable the construction of the roads of the two great Wisconsin companies has been to the investors. We do not know just what the roads cost in money, to be sure, but we can ascertain what their market price is now, and that measures the result of the investment at this time. Those who complain that the roads are valued at a fictitious rate should remember that it is not what a man says or thinks his property is worth, but what he can sell it for, which is the important thing.

Now, the highest prices of the two classes of Chicago & Northwestern shares on the New York Stock Exchange last Wednesday were:

Common.....	38 1/4
Preferred.....	55

The bonds, of which there are twenty-five different issues, have been quoted this month at prices varying from 80, for some of the Extension bonds, to 103, for the preferred sinking-fund bonds. Having reckoned the value of both kinds of shares and of each issue of bonds at the market price, we find

	Face value.	Market price.
The aggregate of the bonds.....	\$43,638,500	\$38,106,000
The common stock.....	14,993,060	8,734,900
The preferred stock.....	21,484,113	11,816,300

Total.....\$80,115,673 \$58,657,200

Now as the company own 1,633 miles of railroad, and these shares and bonds represent absolutely the whole property, the value of the property at this time, measured as we measure the value of all other property, by the price at which it bought and sold in the open market, is \$34,083 per mile.

On the same day (October 14) the highest prices of Chicago, Milwaukee & St. Paul shares were:

Common.....	52 1/4
Preferred.....	61 1/2

The prices of the eighteen issues of bonds which it owes varied from 75 to 104. Calculating the value of each issue of bonds and the stocks at their market prices, we have the following aggregates:

	Face value.	Market price.
The common stock.....	\$15,339,361	\$8,052,507
The preferred stock.....	12,274,483	8,362,045
The bonded debt.....	26,281,610	22,497,900
Total.....	\$53,955,354	\$38,912,452

The company owns 1,399 miles of road, and therefore the average market value of it is \$24,240 per mile: that is all that its owners can get for it, and is the result of their investment, whatever the amount of the latter may have been.

Now of course the companies are trying to make profits which will justify a much larger valuation than the present market price, but the present result attained is that shown above, and the current price of course represents the general judgment of investors in railroad property as to the prospective as well as the present earning power of these roads. Indeed, the common shares would bear no price if it were not for a prospective earning power, for they have not for some time returned any income to their owners.

We suppose that it will not be necessary to point out, even to Wisconsin candidate for office on an anti-railroad platform, that these prices do not nearly represent "the actual money cost" of the railroads in question. If in course of time they can be sold for twice as much, there will have been probably (if the time is not too distant) a good profit on the investment.

Greater Activity in Traffic.

The extremely unsatisfactory character of the August and September traffic leads us to watch with unusual interest the reports of produce receipts, on which depend so many branches of railroad traffic. We noted for the week ending October 3 a considerable increase in activity at Chicago, which however was partly explained by the fact that a good deal of grain was hurried forward at the close of September to fill contracts expiring with the month. More significant is the report of the leading produce receipts at Chicago for the week ending October 10:

	1874.	1873.	Difference.	P. c.
Flour, bb's.....	44,093	35,615	Inc. 8,478	24
Wheat, bush.....	1,160,956	877,250	Inc. 283,706	101
Corn, bush.....	613,904	595,291	Inc. 18,613	34
Oats, bush.....	325,120	298,526	Inc. 26,594	10
Live hogs, No.....	53,516	71,100	Dec. 17,584	25
Cattle, No.....	19,099	16,451	Inc. 2,648	16

As last year business had been affected by the panic, we compare also with the week before the panic last year:

	1874.	1873.	1874.	1873.
Flour....	44,099	36,708	Oats.....	325,120
Wheat.....	1,160,956	1,348,765	Live hogs....	53,516
Corn.....	613,904	1,49,596	Cattle.....	19,099

Here we see no large falling off, except in corn, in comparison with a week of one of the most prosperous seasons of traffic. A farther comparison with the week ending Sept. 19 of this year brings out clearly the great increase in activity within less than a month:

	—Week ending—		—Week ending—
	Oct. 10.		Oct. 10.
Flour.....	44,093	Sept. 19.	325,120
Wheat.....	1,160,956		53,516
Corn.....	613,904		19,099

Reducing flour to wheat, we have the total grain receipts

1,654,000 bushels in the earlier, and 2,100,000 bushels in the later week, showing a substantial increase in traffic. As lake rates remain very low for the time of year (4 to 4½ cents per bushel for wheat from Chicago to Buffalo), we may hope for a continuance of this greater activity.

Record of New Railroad Construction.

This number of the RAILROAD GAZETTE has information of the laying of track on new railroads as follows:

Flint & Pere Marquette.—Extended westward 5 miles to a point fifteen miles west of Reed City, Mich. **Monterey & Salinas Valley.**—Track (of three-foot gauge) is laid from Monterey eastward 19 miles to Salinas City, Cal.

This is a total of 24 miles of new railroad, making 1,125 miles completed in the United States in 1874, against 2,867 miles reported for the same period in 1873 and 5,066 in 1874.

AN ACCURATE MAP of any territory, however small and however clear of intricate detail of streams and other natural features, and of buildings and other structures, railroad tracks, street lines, and the like, requires for its production from the engineer conscientious care and the patient application of the skill acquired by simple experience. Conscientious care is absolutely essential to the construction of truthful and accurate maps. The most skillful hands not working "as for God's laws" will never produce perfect work. The engineer, or other appreciative person, who comprehends the nature and variety of the difficulties to be overcome in arriving at the completion of an exact delineation of the natural and artificial features of any territory always looks upon a map of the truthfulness of which he is assured with peculiar interest. If in addition to its beauty as an accurate work a map has a beauty derived from artistic handling, and is slightly as well as true, it is indeed a noticeable production.

Those who like to look at a good map will certainly be gratified if they find it in their way to examine any one of several examples of such work recently made under the direction of, and in large part personally by, Mr. J. M. Goodwin, of Cleveland, Ohio, for railroad companies having their headquarters in that city. On a map made by Mr. Goodwin for the Lake Shore Company an inscription asserts: "This map is guaranteed correct; the size of the map is about 5x10 feet and it is on a scale of 50 feet to an inch; it is not only correct, but elegantly finished; it represents grounds in great part covered by a network of railroad tracks, every switch-stand and frog in which is shown."

Signal Systems.

The American Society of Civil Engineers has issued the following circular:

September 15, 1874.

At the last Annual Convention, on motion of Mr. J. Dutton Steele, it was—

"Resolved, that a committee of three be appointed to inquire into the various systems of signals in use on the several railways of the United States, and to report upon the same to the next annual convention, with such recommendations as may seem important."

Messrs. J. Dutton Steele, of Pottstown, Pa.; O. Chanute, of New York, and Charles H. Fisher, of Albany, N. Y., were appointed such Committee.

The question of signals has, for quite a number of years past, occupied the attention of railway engineers and managers. In 1866 a very interesting report on this subject was made by Mr. Ashbel Welch, to a railroad convention at the St. Nicholas Hotel, New York. In 1871 a code of signals, rules and regulations for operating railroads, was jointly agreed to by a committee of railroad officers and the Board of Railroad Commissioners of Massachusetts, which was subsequently adopted in 1873 by the Western and Southern Railway Association, now the Railway Association of America.

Notwithstanding these efforts, there is yet such diversity of practice upon the railways of the United States and Canada as to produce considerable confusion and to lead sometimes to deplorable accidents.

The employees of the various railway lines come into such close relations at junctions and crossings, and so frequently change their service from one line to another, that it seems important the utmost uniformity possible should prevail in all matters pertaining to the signals and movements of trains.

The Committee, therefore, proposes to collect all necessary information on the various systems of signals now in use upon the railways of this country, and to co-operate, so far as it can, in promoting uniformity of practice in this respect.

Will you be kind enough to send us a copy of your rules and regulations concerning signals, whether embodied in your time-table or book of instructions, together with a detailed statement of such signals as you may wish to call particular attention to, under any of the following heads?

- General, or train signals with:
 - the steam whistle,
 - the engine bell,
 - the train rope,
 - the hand lamp,
 - the arm and hand,
 - flags,
 - torpedoes,
 - fuses or fire tubes.
- Signal systems by:
 - towers,
 - semaphores or vanes,
 - automatic telegraph.
- Special, or fixed signals at:
 - junctions of railways,
 - grade crossings,
 - switches,
 - stations,
 - tunnels,
 - drawbridges,
 - inclined planes,
 - switch-backs.

You will much oblige us if you will send an explanatory sketch of such of these as may require it, drawn in black lines on a scale suitable for publication in the Transactions of the Society.

The Committee will feel especially obliged in receiving a description of any system of block signals, either mechanical or telegraphic, which may be in use, or favored by you, together with an account of its workings and of the advantages expected, as well as of any interlocking gear and signals to regulate the entrance and departure of trains at any large station.

It is also desired to know what system of signals would be most applicable to a triple or quadruple track railway, in which certain tracks would be used exclusively in one direction.

LOCOMOTIVE RETURNS, MAY, 1874.

Master Mechanics of all American railroads are invited to send us their monthly reports for this table.

NAME OF ROAD.	Miles run to date.	No. of Locomotives in service.	Miles run to date.	No. of Miles run to date.	Cost per Mile in Cents for	Average cost of	Fuel.	Oil.	Lubricants.	Repairs, including wages.	Total.	Coal per ton.	Wood per cord.
Allegheny Valley	138,848	48	48,400	21.05	4.60	4.19	0.84	7.83	17.40	\$1.75	\$2.70		
Atlantic & Great Western (First & Second Div.)	228	80	284,680	35.99	4.96	7.48	0.69	0.74	6.35	20.22	2.62	3.49	
" (Third & Fourth Div.)	908	80	219,262	35.99	6.01	7.48	0.50	0.86	6.26	21.11	2.92	3.49	
" (Mahoning Division)	113	60	169,917	35.99	3.74	7.48	0.47	0.42	5.79	17.90	2.62	3.49	
" (Shenango & Allegheny)	38	9	21,156	58.76	0.59	3.37	0.46	0.68	5.58	10.88	2.10	2.00	
California Pacific	148	11	24,960	76.37	12.47	9.07	0.47	0.72	6.97	39.80	7.75	5.80	
Central Pacific (Western Division)	173.4	42	103,666	40.50	9.17	19.86	0.83	0.23	8.32	38.41	7.80	4.75	
" (Sacramento Division)	119.5	39	95,970	37.69	10.86	17.16	0.80	0.70	6.24	37.66	4.75	4.75	
" (Humboldt Division)	236.6	21	62,276	37.27	4.42	12.51	0.70	0.58	8.74	33.95	7.80	4.75	
" (Salt Lake Division)	182.8	24	87,296	35.91	6.41	19.91	0.79	0.79	7.57	38.47	7.80	4.75	
" (Oregon Division)	151.48	9	19,626	39.97	8.76	11.88	0.69	0.69	7.46	29.42	4.75	4.75	
" (Vernalis Division)	188.3	9	22,310	50.86	10.06	16.54	0.80		8.93	36.35	7.80	4.75	
Chicago, Burlington & Quincy	292	687,431	39.99	16.26	5.85	6.94	0.57		8.01	21.07	2.70	4.26	
Chicago, Rock Island & Pacific (Illinois Div.)	91	129,757	39.92	16.95	5.80	7.03	0.63		7.00	20.46	2.72	3.80	
" (Iowa Division)	71	373,790	39.52	16.52	3.32	7.11	0.63		7.12	18.18	2.72	3.80	
" (Southwestern Div.)	45	310,843	39.58	18.94	4.88	6.48	0.71		6.24	15.16	2.72	3.80	
Cleve., Col., Cin. & Ind. (Columbus Div.)	138	36	124,467	31.60	3.02	6.92	0.52		7.70	18.16	3.25	3.80	
" (Indianapolis Div.)	207	64	169,016	45.33	4.66	6.62	0.74		7.77	19.59	2.75	3.80	
" (Cincinnati Div.)	130	25	71,243	43.63	2.79	6.06	0.51		8.04	18.00	2.62	3.80	
Cleveland & Pittsburgh	130	90	126,997	56.39	3.55	4.53	0.72		6.97	15.77	2.26	1.55	
Del., Lacka. & West. (Bloomington Div.)	80	25	55,445	39.97	29.51	5.00	0.79		6.53	41.84	3.80	6.24	
Denver Pacific	162.7	16	7,222	55.44	4.09	6.21	0.43		6.12	16.85	3.80	6.24	
Flint & Pere Marquette	88,283			55.74	2.10	8.09	0.61		6.88	17.48	4.60	4.60	
Illinois Central (Chicago Division)	282.5	61	144,956	42.10	16.27	19.64	0.71	0.35	6.89	19.15	1.80	4.85	
" (North Division)	280.75	39	107,736	36.84	15.15	17.14	0.47	0.48	6.42	18.55	1.91	4.85	
" (Iowa Division)	401	39	92,462	34.32	17.37	11.99	0.93	0.74	6.78	24.23	2.80	5.95	
Indianapolis, Bloomington & Western	544	68	155,375		4.28	6.61	0.74		8.64	30.27	1.80	2.89	
International & Great Northern													
Kansas Pacific	88	169,415	36.57	12.84	4.72	10.44	0.54		6.58	22.28	3.75	4.21	
Lake Shore & Michigan South. (Buffalo Div.)	91	182,699	50.74	39.56	5.49	6.94			6.84	18.77	3.50	3.60	
" (Erie Div.)	113	221,088	44.11	63.32	6.32	8.00			6.00	20.32	3.80	4.00	
" (Toledo Div.)	79	165,917	36.08	49.30	4.21	10.36			6.93	21.52	4.00	4.00	
" (Mich. South Div.)	210	446,833	48.2	57.66	6.18	8.07			7.42	21.44	4.50	3.60	
Louisville, Cincinnati & Lexington	182.7	18	24,504	70.10	4.85	5.84	0.39		6.47	17.55	3.75	5.00	
Leavenworth, Lawrence & Galveston													
Marquette, Houghton & Ontonagon													
Pennsylvania (New York Division)	119.9	107	269,611	35.61	4.50	13.80	1.10		19.40	0.17	7.12		
" (Amboy Division)	154.2	89	102,944	50.33	3.50	9.90	0.90		14.30	0.17	7.12		
" (Belvidere Division)	84.6	35	60,280	44.77	3.80	11.10	1.20		16.10	0.17	7.12		
" (Philadelphia Division)	204.3	160	402,707	32.30	3.30	6.30	0.90		10.50	0.07	3.28		
" (Middle Division)	131.6	132	329,550	31.18	6.40	6.50	0.60		13.80	0.07	3.28		
" (Pittsburgh Division, East End)	88	151,149	28.98	13.55	8.40	8.60	0.90		17.90	0.07	3.28		
" (Pittsburgh Division, West End)	106	246,776	35.66	16.72	8.90	6.00	0.80		15.70	0.07	3.28		
" (Tyrona Division)	100.2	39	45,873	36.39	5.50	7.20	0.50		14.20	0.07	3.28		
" (West Pennsylvania Division)	103.6	81	65,686	39.14	5.40	4.40	0.40		11.20	0.07	3.28		
" (Lewisburg Division)	62.5	7	11,941	62.93	5.10	3.80	0.50		9.60	0.07	3.31		
" (Bedford Division)	56.5	5	8,142	62.73	4.00	3.90	0.40		8.30	0.07	3.30		
Pitts., Fort Wayne & Chicago (Eastern Div.)	468.9	181	424,076	39.09	4.68	5.83	0.76	0.88	6.58	18.73	2.60	3.26	
" (Western Div.)	280	117	314,183	45.70	3.50	5.90	0.50		6.30	16.30	2.27	3.47	
Pitts., Cin. & St. Louis (Little Miami Div.)	41	96,489	59.10	12.30	4.80	4.40	0.80	2.60	7.40	20.90	2.27	3.47	
South Carolina	242	34	60,207		7.07	5.58	0.71		13.37		2.67		
Toledo, Peoria & Warsaw	250	46	99,230	38.30	6.80	5.30	0.50		7.60	20.30	1.90	3.50	

* Switching engines allowed 6 miles per hour.

Please direct replies to the Chairman, Mr. J. Dutton Steele, Pottstown, Pa.

Respectfully,
J. DUTTON STEELE,
O. CHAUNTE,
CHARLES H. FISHER, } Committee.

General Railroad News.

PERSONAL.

—Mr. A. Wallingford, for many years General Western Freight Agent of the Michigan Central and Great Western roads, and Chicago agent of the Blue Line, died very suddenly in Chicago, October 9. He was a man of great experience and ability in freight business.

—The Democrats of the Springfield (Mass.) District have nominated as their candidate for Congress Mr. Chester W. Chapin, who is President of the Boston & Albany Railroad Company, and a man of wealth, energy and large influence.

—Mr. E. S. McDill, Superintendent of Telegraph of the Missouri River, Fort Scott & Gulf Railroad, was killed while riding on a freight train on that road recently. He was passing forward to the engine, when he slipped and fell between two cars, and, falling on the track, was run over and crushed.

—Major Josiah Hunt, Receiver of the Mississippi Valley & Western Railroad, died suddenly of heart disease at his residence in Hannibal, Mo., October 3. He had been engaged in railroad work as engineer or contractor for many years. He took a prominent part in the building of the Hannibal & St. Joseph road.

—Mr. George Bassett, who was for some years Superintendent of Bridges and Buildings on the Chicago & Northwestern Railway, died at his residence in Batavia, Ill., September 23.

ELECTIONS AND APPOINTMENTS.

—At the annual meeting of the Buffalo, New York & Philadelphia Railroad Company in Buffalo, N. Y., October 7, the following directors were chosen: James Brayley, Myron P. Bush, Cyrus Clarke, Thomas Clark, Wm. G. Fargo, Wm. H. Glenny, C. J. Hamlin, Sherman S. Jewett, George J. Magee, Bronson C. Rumsey, J. F. Schoellkopf, Jonathan Scoville, J. Condit Smith. The board elected the following officers: President, Bronson C. Rumsey; Vice-President, Sherman S. Jewett; Secretary and Treasurer, Henry L. Lyman.

—At the annual meeting of the Hannibal & Naples Railroad Company in Springfield, Ill., October 9, the following directors were chosen: Jacob Bunn, John W. Bunn, H. S. Leland, C. M. Smith, Springfield, Ill.; Jacob K. More, Griggsville, Ill.; Chauncey L. Higbee, Pittsfield, Ill.; J. Dowling, Hannibal, Mo.; A. M. White, A. B. Baylis, New York. The board elected C. M. Smith, President, and W. B. Corneau, Secretary and Treasurer. The road is leased by the Toledo, Wabash & Western.

—At the annual meeting of the International Bridge Company in Buffalo, N. Y., October 7, the following directors were elected: Hon. E. G. Spaulding, E. Carleton Sprague, George Gorham, Buffalo; John Bell, Belleville, Ont.; Henry Yates, Brantford, Ont.; Joseph Hickson, Hon. James Ferrier, Montreal, P. Q. The board elected Hon. E. G. Spaulding, President; Joseph Hickson, Vice-President; R. Wright, Montreal, Secretary and Treasurer; E. P. Hannaford, Montreal, Chief Engineer; W. J. Spicer, Montreal, Superintendent.

—At the annual meeting of the St. Louis and Southeastern Railway Company in Evansville, Ind., October 6, 59,972 shares were represented and the following directors were unanimously elected: Samuel Bayard, Thomas E. Garvin, Wm. Heilmann,

John A. Reitz, Evansville, Ind.; Joseph J. Castles, Equality, Ill.; J. F. Alexander, Charles W. Gardner, Edward F. Winslow, St. Louis; J. P. Giraud Foster, D. A. Lindley, Charles W. Opdyke, William B. Opdyke, James H. Wilson, New York. Messrs. Foster, Lindley and the Opdykes are new directors, replacing S. B. Vance, J. McGinn, W. L. Gordon and Bluford Wilson. The board re-elected Gen. Edward F. Winslow President; Gen. James H. Wilson, Vice-President, and J. F. Alexander Treasurer, and chose Edwin L. Abbott Secretary, in place of Charles W. Gardner, who resigned some weeks since. Samuel Bayard, James H. Wilson, and J. F. Alexander were chosen the Executive Committee. The executive officers of the road are the same as last year, except that Mr. George S. Winslow, late Assistant General Superintendent, is now Superintendent of the St. Louis Division, and Gen. R. H. G. Minty of the Nashville Division.

—Mr. E. McKitterick, Cashier of the Merchants' National Bank of Burlington, Ia., has been appointed Receiver of the Burlington & Southwestern Railroad, by the Davis County District Court, in the suit of E. B. Ward & Co. against the company.

—At the annual meeting of the Gulf, Colorado & Santa Fe Railroad in Galveston, Tex., October 7, the following directors were elected for the ensuing year: H. Rosenberg, M. Kopper, John Sealy, R. S. Willis, A. C. Crawford, James Borley, J. H. Catlin, B. H. Bassett, J. J. Hendley, D. T. Ayers, W. H. Williams, W. Gresham and J. Hancock.

—Mr. Milo Jacks, late of the Northwestern Union road, has been appointed General Roadmaster of the Winona & St. Peter Railroad in place of G. W. Dye, resigned.

—The second-mortgage bondholders who bought the Cayuga Lake Railroad at the recent sale have organized a new company under the same name, and have elected the following officers: President, Talmadge Dehafield, Aurora, N. Y.; Vice-President, Fred Collins, Philadelphia; Secretary and Treasurer, James Stillman, New York; Superintendent, J. Lewis Grant, Ithaca, N. Y.

—At the annual meeting of the Toledo, Wabash & Western Railway Company in Toledo, O., October 7, the following directors (one-third of the board) were elected: G. I. Seney, A. B. Baylis, David Davis, New York; A. M. White, Brooklyn, N. Y.; C. M. Smith, Springfield, Ill. Messrs. Smith and White were not in last year's board, but White was a director for many years until 1872.

—Mr. E. W. Porter has been appointed Purchasing Agent of the Canada Southern Railway, with office at St. Thomas, Ont.

—At the annual meeting of the Memphis & Charleston Railroad Company in Memphis, Tenn., October 7, 126,134 shares were voted on and the following directors chosen: P. C. Betha, J. C. Neesley, Napoleon Hill, F. H. Cossitt, Memphis, Tenn.; George P. Beirne, W. W. Garth, Huntsville, Ala.; John D. Rafter, Tusculum, Ala.; Exline Norton, B. T. Wilson, New York. The new directors are Messrs. Hill, Norton, Cossitt and Wilson, who replace R. C. Brinkley, H. E. Jackson, J. J. Donagan and Albert H. Jones.

—The first board of directors of the newly organized Bloomfield Railroad Company is as follows: Wm. H. Irwin, Hughes East, John W. Gray, J. N. Conley, Wm. Mason, Thompson D. Hunt, A. G. Cavins and J. S. Ienbauer. The headquarters of the company are at Bloomfield, Greene County, Ind.

—At the annual meeting of the Ohio & Mississippi Railway Company in Cincinnati, October 8, the following directors were chosen in place of the three whose terms have expired: W. T. McClintic, Cincinnati; John D. Prince, New York; Sir Alexander T. Galt, Montreal, Canada. McClintic was re-elected and Messrs. Prince and Galt succeeded W. H. Aspinwall, of New York, and Lars Anderson, of Cincinnati. The board re-elected Daniel Torrance, Jr., President, and appointed Daniel Tor-

rance, Jr., F. Schuchardt, John King, Jr., John D. Prince and Sir A. T. Galt the Executive and Finance Committee.

—Mr. W. C. Van Horne, late General Superintendent of the St. Louis, Kansas City & Northern Railway, has accepted an appointment as General Superintendent of the Southern Minnesota Railroad.

—At the annual meeting of the Louisville & Nashville Railroad Company in Louisville, Ky., October 7, E. D. Standford, H. O. Newcomb and W. B. Caldwell were chosen directors for the ensuing three years. The board chose Thomas J. Martin President, to succeed the late H. D. Newcomb, and E. D. Standford, Vice-President.

—At the annual meeting of the Western Union Telegraph Company in New York, October 14, the following directors were elected for the ensuing year: William Orton, James H. Banker, Alonso B. Cornell, Harrison Durkee, Marvin Green, Joseph Harker, Edwin D. Morgan, Augustus Schell, William Thorn, C. Vanderbilt, Frank Work, Chester W. Chapin, Wilson G. Hunt, David Jones, C. Livingston, James Milliken, Levi P. Morton, George H. Mumford, O. H. Palmer, George M. Pullman, E. S. Sanford, John Steward, Moses Taylor, Daniel Torrance, W. H. Vanderbilt, W. R. Vermilye, E. B. Wesley, Stillman Witt and E. D. Worcester.

TRAFFIC AND EARNINGS.

—The shipments of Cumberland coal over the various lines for the nine months ending October 3 were as follows:

	1874.	1873.	Increase or Decrease.	P. c.
Baltimore & Ohio.....	1,070,517	1,191,311	Dec. 121,794	10%
Chesapeake & Ohio Canal.....	628,077	620,865	Inc. 7,212	2%
Sedford Div., Penna. R. R.....	60,835	76,726	Dec. 15,891	23%
Totals.....	1,734,629	1,858,902	Dec. 124,273	6%

—The earnings of the Atchison, Topeka & Santa Fe road for the eight months ending August 31 were as follows:

	1874.	1873.	Increase.	Decrease.	P. c.
Earnings.....	\$787,988	\$742,218	\$45,768		6%
Expenses.....	380,075	400,159		\$19,084	29%
Net earnings.....	\$407,911	\$342,059	\$65,852		80%

The earnings were \$1,554 per mile in 1874 and \$1,469 in 1873. The expenses were 44.3 per cent. of earnings in 1874, and 67.25 per cent. in 1873.

—The tonnage of anthracite coal over the lines given for the nine months ending October 3 was as follows:

	1874.	1873.	Increase or Decrease.	P. c.
Del., Lacka. & Western.....	1,901,677	2,358,558	Dec. 456,881	19%
Lehigh Div., Central of N. J.....	2,030,203	2,177,643	Dec. 147,440	6%
Del. & Hudson Canal Co.....	1,761,286	2,207,469	Dec. 446,183	19%
Pa. Coal Co., by Erie Ry.....	595,744	951,094	Inc. 355,350	4%
Shamokin Div., Northern Penna. R. R.....	428,362	491,599	Dec. 63,237	12%
Summit Branch.....	359,220	364,255	Dec. 5,035	1%
Totals.....	7,496,492	8,500,808	Dec. 1,004,316	12%

—The anthracite coal tonnage of the lines given (whose year begins December 1) for the ten months ending October 3 was as follows:

	1874.	1873.	Inc. or Dec.	P. c.
Philadelphia & Reading.....	4,856,652	5,345,760	Dec. 489,108	9%
Schuylkill Canal.....	595,771	588,000	Dec. 7,771	15%
Lehigh Valley.....	3,971,106	3,587,791	Dec. 383,315	4%
Penna. & New York.....	590,867	597,008	Dec. 6,141	1%
Totals.....	9,314,456	10,068,649	Dec. 754,193	7%

—The tonnage of bituminous coal over the lines given for the nine months ending October 3 was as follows:

	1874.	1873.	Inc. or Dec.	P. c.
Huntingdon & Broad Top.....	240,048	303,061	Dec. 63,013	32%
Clearfield coal over Tyrone Div., Pa. R. R.....	495,111	446,450	Inc. 48,661	10%
Pa. & N. Y. (ten months).....	262,835	244,580	Inc. 18,255	3%
Totals.....	987,994	1,244,191	Dec. 256,197	4%

—The earnings of the Atlantic & Pacific Railroad and leased lines for the first week in October were: 1874, \$126,100; 1873, \$102,028; increase, \$24,072, or 23% per cent.

—The earnings of the Denver and Rio Grande Railway (main line) for August were as follows:

	1874.	1873.	Increase.	Decrease.	P. c.
Earnings.....	\$35,188	\$36,743	\$1,555		4%
Expenses.....	19,471	17,816	\$1,655		9%
Net earnings.....	\$15,716	\$18,927	\$3,211		17%

The expenses were 55.34 per cent. in 1874 and 48.49 per cent. in 1873. The earnings per mile were \$208 in 1874, and \$311 in 1873.

—The coal tonnage of the Pennsylvania Railroad for the nine months ending October 3 was: coal, 1,978,240 tons; coke, 352,830 tons; total, 2,371,079 tons of 2,240 pounds.

—The earnings of the Indianapolis, Cincinnati & Lafayette Railroad for August were:

	1874.	1873.	Increase.	Decrease.	P. c.
Earnings.....	\$156,835	\$169,575	\$12,740		7%
Expenses.....	89,528	106,748		\$17,220	16%
Net earnings.....	\$67,307	\$62,827	\$4,480		7%

Per cent. of expenses to earnings: 1874, 57.08; 1873, 62.95. For the eight months ending August 31 the earnings were: 1874, \$1,169,685; 1873, \$1,292,245; decrease, \$62,558, or 5.1-16 per cent. Earnings per mile: 1874, \$6,535; 1873, \$6,884.

—The following companies have thus far reported earnings for September:

	1874.	1873.	Increase.	Decrease.	P. c.
Atlantic & Pacific.....	\$408,418	\$502,087		\$93,669	23%
Burlington, Cedar Rap. & Minn.....	126,295	144,901		18,606	13%
Central Pacific.....	1,466,000	1,407,224		58,776	4%
Chicago, Danville & Vin.....	71,851	72,273		422	0%
Cleveland, Col. & Ind.....	309,384	459,237		149,853	19%
Denver & Rio Grande.....	36,260	34,750	\$1,510		4%
Illinois Central.....	763,106	884,485		121,379	13%
Indianapolis, Bloom. & W.....	104,192	168,454		64,262	6%
Missouri, Kansas & Texas.....	334,400	399,939		65,539	16%
Ohio & Mississippi.....	364,674	360,371		4,303	4%
St. Louis, Alt. & T. H., main line.....	111,541	126,258		14,717	11%
St. Louis, Alt. & T. H., branches.....	55,261	52,044	\$3,217		6%-16
St. Louis, I. M. & Southwestern.....	258,447	244,967	\$13,480		5%
Toledo, Peoria & Warsaw.....	107,338	127,782		20,444	16%
Toledo, Wabash & West.....	459,894	593,810		133,916	22%-16
West Wisconsin.....	90,000	108,000		18,000	16%

The numerous large decreases look worse than they were in reality, for the September business last year was exceptionally large.

—The earnings of the Great Western Railway of Canada for the week ending September 18 were: 1874, \$21,064; 1873, \$28,640; decrease, \$7,576, or 26% per cent.

—The earnings of the Grand Trunk Railway for the week ending September 19 were: 1874, \$42,000; 1873, \$47,400; decrease, \$5,400, or 11% per cent. Traffic was interfered with by the preparations for change of gauge.

—The earnings of the Central Pacific Railroad for September were: 1874, \$1,406,000; 1873, \$1,407,224; 1872, \$1,254,688; de-

crease, 1874 from 1873, \$1,224, or 0% per cent.; increase, 1874 over 1872, \$151,312, or 12.1-16 per cent.

For the nine months ending September 30 the earnings were: 1874, \$10,317,003; 1873, \$10,196,806; 1872, \$9,307,444; increase, 1874 over 1873, \$119,007, or 1% per cent.; increase, 1874 over 1872, \$1,010,459, or 10% per cent.

—For the week ending Oct. 3 the flour and grain receipts at the six Western lake ports, St. Louis and Peoria, were larger in every item than during the previous week, and compared with the corresponding week last year were 7 per cent. greater in flour, 54 per cent. in wheat, 60 per cent. in oats, and 10 per cent. less in corn. Last year's movement was considerably affected by the panic, but this year's wheat receipts are nearly a sixth greater than those for the same week in 1872. From August 1 to October 3 the receipts were 12% per cent. less in flour, 26 per cent. less in wheat, 70 per cent. in corn and 27 per cent. in barley, and 14 per cent. more in rye. The total bushels of all kinds of grain for four years has been:

	1874.	1873.	1872.	1871.
36,610,597.	50,046,979.	45,461,237.	43,875,451.	

—The earnings of the Lake Shore & Michigan Southern Railway for the six months ending June 30 were as follows:

	1874.	1873.	Increase.	Decrease.	P. c.
Earnings.....	\$2,728,422	\$2,797,643	\$69,221	\$1,060,226	54 10%
Expenses.....	5,372,740	6,718,818		1,346,078	30 20
Net earnings.....	\$3,355,682	\$3,078,830	\$276,852		9

The expenses were 61.55 per cent. of earnings in 1874, and 68.58 per cent. in 1873.

—The earnings of the St. Louis, Iron Mountain & Southern Railroad for the first week in October were: 1874, \$82,906; 1873, \$64,286; increase, \$18,620, or 29 per cent.

THE SCRAP HEAP.

Railroad Manufactures.

The Kimball Manufacturing Company, of San Francisco, is building six passenger coaches for the North Pacific Coast narrow-gauge road. The bodies of these cars are 35 feet long and 7 1/2 feet wide.

The Detroit Tribune says:

"Nine palace cars—or rather pieces for that many—are now being packed up at the Pullman Car Works on Crogan street, in this city, preparatory to being sent to England to be used on one of the lines of railway there. A number of workmen will be sent out to that country to put them together, and they will sail two weeks from to-day."

The Altoona (Pa.) Rolling Mills have stopped work for the present, having no orders on hand.

The Huntington (Pa.) Car Works have received an order for a large lot of freight cars.

OLD AND NEW ROADS.

Iowa Eastern.

The Iowa District Court in a suit against this company has decided that the bondholders' liens are paramount to those of the mechanics' lien holders, on the ground that these bonds were first-mortgage bonds, and were issued and sold before the construction of the road commenced. The case will be taken to the Superior Court. The amount of bonds is about \$200,000, and the amount of the mechanics' liens about \$50,000.

The case is of some importance as establishing a new precedent. We believe it has always been held that a mechanics' lien was a first lien on the property on which the work was done. The effect of the decision, however, is not to change the mechanics' lien on any construction which existed before it was mortgaged, but rather to assert that a mortgage on a property yet to be created is a notice that no future lien, mechanics' or other, will be prior to it.

Buffalo Valley.

Trains are now running regularly over this road from the Pittsburgh, Washington & Baltimore, at Garrett's, Pa., to Berlin, 10 miles.

Oayuga Lake.

The second mortgage bondholders who bought the road at the recent sale have organized a new company under the same name. The intention is to put the road in good order, increase facilities and do what is possible to improve the business.

Burlington & Southwestern.

In the suit of E. B. Ward & Co. against this company in the Davis County (Ia.) District Court, the Court has appointed E. McKitterick, of Burlington, Ia., Trustee and Receiver. It is stated that he will also, probably, be appointed Receiver in the foreclosure suit now pending.

Illinois Central.

The Land Department reports for September sales of 3,090.05 acres for \$22,978.51, and cash collections on land contracts of \$38,724.94.

The Traffic Department reports earnings as follows:

	1874.	1873.	Decrease.	P. c.
In Illinois.....	\$606,254.70	\$603,688.74	\$2,565.96	10 3-16
In Iowa.....	166,831.30	220,818.06	\$53,986.76	24%
Total.....	\$773,106.00	\$824,506.80	\$51,400.80	13%

The decision of the Illinois Supreme Court has been filed in the case of the application for a writ of mandamus to compel this company to sell its lands in accordance with the provisions of the law of 1873. The Court refuses the application, and intimates that a court of chancery is the proper channel through which to find relief, if the company has in any way failed to comply with the provisions of the charter.

Northern Pacific.

The Bismarck (Dak.) Tribune is informed by the Superintendent, Mr. Sullivan, that the Dakota Division from Fargo to Bismarck (196 miles) will be closed for the winter about November 15. The road, however, will be opened much earlier in the spring than it was this—probably about March 1. Snow fences have been built between Jamestown and Bismarck, and they will be able to open the road at any time within a week.

Ohio Canal.

The strike of the boatmen has been ended by most of the coal operators and dealers giving way and consenting to pay the increase of about 20 per cent. on coal freights asked for by the boat owners.

Worcester & Somerset.

The Newton (Md.) Record says: "This road will not be sold by the sheriff of Somerset County, as advertised. There are some legal obstacles in the way, in the shape of prior claims, and for the present the road will remain under its old management. Several parties are anxious to purchase it, and it is rumored that the Philadelphia, Wilmington & Baltimore Company are among the number. If the latter corporation succeeds in getting control, it is believed they will immediately make the extension to Cherrystone."

Turtle Creek Valley.

The line has been located from the Pennsylvania road at Moss Creek Station to the crossing at Barron Creek and the line surveyed to a junction with the West Pennsylvania at Salsburg. Another line is to be run by way of New Alexan-

dria to the West Pennsylvania at Livermore. It is stated that the Pennsylvania Railroad Company will build the road if the right of way is given.

Goss' Run.

This road is about 2 1/2 miles long and is a branch or extension of the Bellefonte and Snow Shoe road intended to reach certain coal property in the Clearfield region. The grading and bridging are completed, and the Pennsylvania Railroad Company, which is to work the road, will shortly begin laying track.

Cincinnati Southern.

A Cincinnati dispatch of October 12 says that the trustees have announced the sale in New York of the second \$1,000,000 of Cincinnati 7-30 bonds for construction of the Southern Railroad. The bonds were sold at par with accrued interest. All the heavy grading on the road between Cincinnati and Chattanooga is under contract, and 600 men are working upon it.

With the remaining ten millions in authorized bonds the trustees promise to have the entire road ready for cars in twenty months.

Memphis & Charleston.

At the annual meeting in Memphis, Tenn., October 7, a resolution was passed authorizing the appointment of a General Manager of the road. It was also resolved that hereafter the road should be operated and the books kept as a whole, and not in divisions, as at present. The directors were instructed to secure such alteration of the charter as will allow the election of directors at one place, instead of being obliged to open polls in Memphis and Huntsville at one time.

New York & Long Branch.

Track is being laid between Woodbridge Creek and Perth Amboy, N. J. The road is to be finished at once up to the Raritan Bridge, so that construction trains can run to that point.

Pennsylvania—New York Division.

The necessary changes of switches and depots have been made, and trains will begin running on the right-hand track October 18.

The new depot in Jersey City is so near completion that the whole of it will be opened in a few days. A part is already in use and has been for some time.

Manchester & Keene.

All the towns along the line except Keene, N. H., have renewed or reaffirmed the subscriptions voted to this projected road some years ago. The subject is now under consideration in that town.

Virginia & Truckee.

This company has a considerable force at work improving the grade between Washoe and Steamboat, Nev. In some places the track is being raised and the heavier grades are being cut down.

St. Louis & Southeastern.

The suit for the appointment of a receiver for the Kentucky Division of the road will come to a hearing at Henderson, Ky., October 19.

Alabama & Chattanooga.

The abandoned portion of the road southwest of Tuscaloosa is being rapidly put in repair again, and trains have begun running to Entaw, Ala., 35 miles from Tuscaloosa and 233 from Chattanooga.

Tyrone & Clearfield.

Iron is being laid on an extension about six miles long, from Clearfield, Pa., southwest up the West Branch of the Susquehanna to Curwensville.

Southwest Pennsylvania.

The survey of the extension from Mount Braddock, Pa., southward to Uniontown is completed, and grading will soon be commenced.

Bloomfield.

The Bloomfield Railroad Company filed its articles of incorporation with the Secretary of State of Indiana October 10. It is to run from Bloomfield, Greene County, west 38 miles to Merom on the Wabash River. The capital stock is to be \$1,000,000.

Paducah & Memphis.

The directors have been in consultation in Memphis, Tenn., and have finally resolved to advertise at once for proposals for completing the gap in the road between Covington and Trimble, Tenn. This gap is about 45 miles long, and 26 miles of it has been graded for some time, leaving 19 miles still to be done. It is now intended to have the work completed some time in December, in order to save to the company \$100,000, one-half of the Memphis subscription, which will be lost if the track is not laid through by the end of the year.

Efforts are to be made to compromise the suits now pending between the company and some of the stockholders.

Cairo & St. Louis.

A construction train has been sent by river to Cairo, Ill., and will soon be at work on the road. A large quantity of iron is already at that point.

The first installment of \$50,000 of the \$100,000 in bonds subscribed by Union County has been paid over to the company.

Bangor & Piscataquis.

The grading on the extension from Guilford, Me., northward to Abbott is nearly completed and the first lot of iron has been received.

Wiscasset & Moosehead Lake.

The directors report that subscriptions have been made to the amount of \$212,000, which is still too little to warrant the commencement of the work. Offers have been made to build the road provided \$5,000 per mile can be subscribed.

Rockford, Rock Island & St. Louis.

The motion for the appointment of a receiver in the Union Trust Company or Osterberg suit came up in the United States Circuit Court in Chicago, October 5, and after argument was put over to October 18.

Flint & Pere Marquette.

Mr. H. C. Potter, the General Manager, informs us that the present condition of the extension of this road between Reed City, Mich., and the mouth of Pere Marquette River on Lake Michigan (Ludington) is as follows:

At the close of 1873 the grading, bridging and delivery of ties for the entire 48 miles had been completed, with the exception of an estimated amount of \$15,000. This year the company has purchased 1,000 tons of iron rails in New York, 3,000 tons of iron rails of the Milwaukee Iron Company, and 1,000 tons of steel rails of the North Chicago Rolling Mill. About 15 miles west of Reed City have been ironed, and the entire distance to the Lake will be laid by the 15th of November, 1874.

This will make the whole length of the road 286 miles, including 18 miles of branches.

Peoria, Atlanta & Decatur.

Tracklaying is in progress on the northern end between Peoria and Atlanta and on the southern end between Decatur and Macon. A large force is at work on the unfinished grading

between Maros and Atlanta. Arrangements have been made, it is stated, to pay off the creditors of the company.

Pennsylvania.

At the special meeting in Philadelphia, October 3, the following resolutions of respect to the late President Thomson were passed:

"Whereas, Since the last meeting of the stockholders John Edgar Thomson, the Chief Engineer of the Pennsylvania Railroad, and for more than twenty years, and until his death, the President of the company, has departed this life,

"Resolved, That the stockholders desire to record upon their minutes this resolution as an expression of their sense of the great ability, strict integrity and untiring industry with which John Edgar Thomson, their late President, devoted himself to the interests of the Pennsylvania Railroad Company until the close of his highly distinguished and eminently useful career."

The employees in the various shops belonging to the company are now working only eight hours per day.

Shenandoah Valley.

It is reported that the charter and franchises of this company, with what work has been done, have been sold to the Valley Railroad Company. The Shenandoah Valley Company was chartered to build a railroad up the valley, as was generally understood, in the Pennsylvania interest, as the Valley road was in that of the Baltimore & Ohio. No track has ever been laid on the road, but some grading was done on the northern end. By this purchase the Valley Company would not only prevent the building of a competing line, but would secure a charter for its projected extension to the Tennessee line, which is covered by the Shenandoah charter.

Chicago, Burlington & Quincy.

In the suit brought at Princeton, Ill., for violation of the railroad law, judgment has been given against this company.

Springfield & Northwestern.

The contract for the completion of the 11 miles of road from Central, Ill., southeast to Springfield has been let to Charles Tuttle, work to be completed in 30 days. Iron for this section has begun to arrive in Springfield.

Logansport, Crawfordville & Southwestern.

The mortgage under which suit for foreclosure has been commenced and a receiver appointed is the second mortgage. The holders of the first-mortgage bonds generally agreed to fund their coupons for two and a half years and have taken no steps to foreclose.

Union Pacific.

Work has been commenced on the company's rolling mill at Laramie Station, and the foundation is in progress. The mill is to be of stone with slate roof and the main building will be 230 by 130 feet. The main engine is to be of 600 horse-power and there will be several smaller engines. An abundant supply of water has been secured. The mill will have a capacity of 130 tons of re-rolled iron per day, and is expected to save to the company the cost of transporting iron to and from the mills where the work has been heretofore done.

In the United States District Court for Iowa the grand jury has found indictments against the President, Superintendent and directors for failing and refusing to operate the road as a continuous line to its eastern terminus at Council Bluffs.

Southern Pacific.

The bridge over Kern River on the extension southward of the San Joaquin Valley line has been completed, and track-laying beyond the river has been commenced.

New York Central & Hudson River.

Much dissatisfaction is expressed at the removal of the main depot in Buffalo to the new transfer depot in East Buffalo, which is removed some two miles from the main part of the city. Passengers are carried from the new depot to the old one by a transfer train, and it is said that the arrangement produces constant delay and trouble.

St. Louis, Lawrence & Denver.

In the suit brought by George Opdyke to compel the Pacific Railroad Company of Missouri to pay interest on certain bonds of this company, the United States Circuit Court has set aside the demurrers raised by the defendants and ruled that the plaintiff has a ground for action.

The road was leased by the Missouri Pacific in 1870, when its construction was first commenced, and the interest on \$1,000,000 bonds was guaranteed by the lessee. Near the end of 1873 the lease was rescinded and the November interest on the bonds was not paid. The suit now pending is to compel the Pacific Company to make good the guarantee contained in the lease, on the strength of which plaintiff claims to have purchased the bonds.

Delaware River & Bound Brook.

Trouble has arisen with one of the contractors under the National Railroad Company and the Union Railroad Company, which claimed to succeed to the National. This man did some grading on five miles of the line near Pennington, which he now holds possession of and refuses to allow this company to locate its road over. It is claimed, on the other hand, that he has no claim on the new company, as the National Company was dissolved and his claim died with it.

East Tennessee, Virginia & Georgia.

It is reported that the firm of McClurg & Co., of Knoxville, Tenn., has bought from its owners the branch line from Johnson's Depot, Tenn., on this road east to the Cranberry Iron Works in North Carolina. This branch is 13 miles long, but it is in an unfinished condition, and the new purchasers intend to complete it at once.

Illinois & St. Louis Bridge.

The company is now running passenger trains of its own across the bridge, between the new union depot in St. Louis and East St. Louis. The engines used over the bridge are built to burn coke, have 18 by 24 inch cylinders and six wheels all connected; they weigh 37 tons.

General Passenger Agents' Meeting.

A meeting of General Superintendents was held in St. Louis, October 7, Mr. Robert Harris, of the Chicago, Burlington & Quincy, being Chairman. As a result of this meeting a committee of five general passenger agents has been appointed, consisting of E. A. Ford, Atlantic & Pacific; James Charlton, Chicago & Alton; A. C. Dawes, Kansas City, St. Joseph & Council Bluffs; C. K. Lord, St. Louis, Kansas City & Northern; and T. Fendell, who are to call a meeting of general passenger and ticket agents of the various Western competing lines. The meeting was to be held at the Grand Pacific Hotel, Chicago, October 14, and was, if possible, after consultation, to submit a plan for the abolition of excursion rates and reduction of passenger expenses.

Erie.

A London (England) telegram, dated October 9, says: "The report made by the London accountants of their investigation into the affairs of the Erie Railway Company, which was read to-day in the Stock Exchange, says that in three years, ending with September, 1873, the profits of the road were \$1,008,775, instead of \$5,352,673, as stated in the company's accounts. This amount is subject to a further reduction in respect to various items charged to capital or not

yet admitted. The report shows a loss on the working of the Atlantic & Great Western Railroad up to Sept. 30, 1871, and says that \$3,240,167 were paid by the Erie Company as dividends in the years 1871, 1872 and 1873. The accountants consider that under the circumstances the dividends on the preferred stock were fairly earned.

"The report says that but for the deficit of \$456,444 shown by the corrected profit and loss account, as existing September 30, 1871, \$270,000 would have been available, subject to the adjustment of outside matters, for a dividend on the common stock, after the payment of four dividends on preferred stock for the two years ending June 30, 1873. The accountants anticipate that the value of the recoveries from Jay Gould will fall very far short of their nominal amount. An abstract of the statement of assets and liabilities of the company up to Sept. 30, 1872, shows the liabilities to be \$115,449,311, and the assets \$118,265,979.

"An authoritative examination and determination of many questions of law and fact affecting the nature of multifarious liabilities and assets must be accomplished before a complete elucidation of the present financial position of the company can be arrived at. The accountants express themselves highly satisfied with the facilities afforded them for the prosecution of their investigation in New York. The report covers the period from Sept. 30, 1871, to March 31, 1874.

"There are many important appendices to the report, which were not read, and which will not be published until the issue of Capt. Tyler's report, which they will accompany."

Los Angeles & Independence.

The engineers have been making a preliminary survey through the Tejuja Canon, and report that a practicable line has been found. They believe, however, that there are better passes through the Sierra Madre than this.

Monterey & Salinas Valley.

The rails are laid on this narrow-gauge road from Monterey, Cal., eastward to Salinas City, 19 miles, and the road is nearly ready to be opened for business. The warehouses already erected on the road are filled with wheat ready for shipment, and a large business is expected.

San Luis & Santa Maria.

Surveys have been made for this road from Avila, Cal., on the bay of San Luis to San Luis Obispo, and thence southerly by way of Arroyo Grande into the Santa Maria valley. The line is 36 miles long, and arrangements are being made to build the nine miles from Avila to San Luis Obispo at once.

West Jersey.

It is stated that this company has made a general reduction of 10 per cent. in the wages of employees.

Montclair.

The sum of \$600,000 which the committee thought necessary to put this road in good condition was required for the following purposes: to complete payments for right of way, \$125,000; equipment, \$175,000; to complete the road to Greenwood Lake, \$100,000; to complete Morristown Branch to Caldwell, including tunnel at Montclair, \$200,000. This branch to Caldwell would be fairly profitable, and a good deal of money has been spent on it, which is now absolutely lost, but which the completion of the branch would make productive.

Much complaint is made of the condition of certain highway bridges over the track in the towns of Bloomfield and Montclair. Owing to the bankrupt condition of the company, these wooden bridges have been allowed to fall into decay, and the board of chosen freeholders declines to have them repaired at the expense of the county, as the company is required by law to keep them in good condition.

Traverse City.

The annual report of the Grand Rapids & Indiana Company says of this road: "This line is operated by your company without lease or other defined terms. The receipts since December 1, 1873, have increased about 19 per cent. over the same period of last year. The net earnings, however, were not sufficient to meet the interest coupons due February 1, amounting to \$8,780, which still remain unpaid.

The road is 26 miles long, from the Grand Rapids & Indiana at Walton, Mich., west by north to Traverse City. The funded debt is \$250,000. The road was built by the Continental Improvement Company as contractor.

East River Bridge.

The necessary number (two-thirds) of the private stockholders have signified their acceptance of the act passed by the last Legislature, which provides for retiring the private stock and vesting the entire control in the cities of New York and Brooklyn. The company will hereafter be under the management of a board of 20 directors, of which the Mayor and Controller of New York will appoint eight, the Mayor and Controller of Brooklyn eight, and the remaining four will be the two Mayors and the two Controllers, who will be directors *ex-officio*. The 16 appointed directors will hold office until the bridge is finished.

Chicago & Bureau County.

A project is on foot for a new narrow-gauge railroad from Chicago west by south to the coal fields of Bureau County, Ill., making a line similar in direction to the Chicago, Burlington & Quincy or the Chicago, Rock Island & Pacific.

Indianapolis, Bloomington & Western.

The October coupons on the first-mortgage bonds were not paid when due, and the company is now in default on all its issues. It is stated that a circular is to be issued to the first-mortgage bondholders, similar to that already sent to the other holders, asking them to fund several coupons.

It is understood that the second-mortgage bondholders, or a large number of them, do not intend to fund, but desire to take united action to secure their rights. The company appears very anxious to close up the business, and has been urging the smaller holders to come forward and accept the company's proposal.

The company has published no further statement of its affairs.

Chicago, Burlington & Quincy.

This company now requires passengers to show their tickets before entering the car, in accordance with the universal European practice.

Time at the shops has been reduced from ten to nine hours.

ANNUAL REPORTS.

Western Union Telegraph.

The report for the year ending with June last gives the amount of stock outstanding at \$33,785,675 (besides \$7,287,735 owned by the company), and \$5,948,910 of bonded debt. For the year the result of the business was:

	1873-74.	1872-73.
Earnings.....	\$9,262,653 58	\$9,338,018 51
Expenses.....	6,755,733 58	6,575,055 83
Net earnings.....	\$2,506,920 15	\$2,762,962 69

There was an increase of about 13 per cent. in the number of messages transmitted, which reach 16,329,255, the average receipt for which was about 55 cents each. The disposition of net earnings shows that only about \$991,000 was required to pay the interest on the bonds and the 3 per cent. dividend, most of the remainder having been expended for additions to

the property. The total net earnings above the interest charged, however, were only enough to pay a 6 per cent. dividend on the stock, instead of the 8 per cent. dividend which the company proposes to pay hereafter. During the year there were added to the company's property, by construction purchase or lease, 5,828 miles of poles, 21,264 miles of wire, and 448 offices. At its close the company worked 71,585 miles of line, 175,135 miles of wire, and had 6,188 offices.

The report says:

The \$2,506,920.15 profits of the year have been applied as follows:

Interest on bonds.....	\$315,178 83
Construction of new lines and erection of additional wires.....	511 849 52
Purchase of the stock of sundry telegraph companies in the Western Union system, on which rent is paid annually.....	96,282 00
Patents.....	3,000 00
American Telegraph Company's bonds redeemed October 1, 1873.....	80,500 00
Sinking Fund for redemption of building bonds of 1902.....	30,000 00
Real estate of which \$251,234 81 was expended on the building, Broadway and Bay street, in excess of the loan of \$1,500,000.....	251,234 81
Dividend of the two per cent. payable July 15, 1874.....	675,574 00
	\$2,012,946 68
The balance.....	\$493,973 47
has been carried to the credit of income account.	

THE PACIFIC & ATLANTIC LEASE.

In my last annual report it was stated that we had acquired a majority of the stock of the Pacific & Atlantic Telegraph Company, and that negotiations were then pending for a lease of its lines to the Western Union Company. The negotiations were concluded in December last, and on the 1st of January the lines and property of that company were turned over to us on a lease of ninety-nine years, at an annual rental equal to 4 per cent. on the capital stock of \$2,000,000, the rent to be applied first to the payment of the debts of the Pacific & Atlantic Company, and thereafter to be distributed *pro rata* among the stockholders. Of the capital of \$2,000,000 the Western Union Company owns \$1,415,960. The entire rental for the year 1874 will be required to pay the debts of the P. & A. Co. It is probable, however, that thereafter the rental can be distributed among the stockholders.

TELEGRAPHIC MONEY ORDERS.

The operations of the Department of Telegraphic Money Orders, which has been established less than three years, are highly satisfactory. During the last year it transferred—that is, received at one office and paid out at another—about \$2,000,000, for which service the company received a revenue of \$80,829.86. Of this sum about \$20,000 was for premiums, and the balance for tolls on the messages required in making the transfers. The revenue from this source during the preceding year was about \$57,000, and the increase during the past year has been about forty per cent. The increase in the number of transfers, however, was about sixty per cent., attended by a reduction of the average amount transferred in each case from \$51.31 the preceding year to \$61.83 during the past year. This reduction and increase indicates the growing popularity of the service. The receipt in small sums, at a large number of offices, of an aggregate of \$2,000,000, and the payment of this amount at other offices, involving the handling of \$4,000,000, has been attended by an aggregate loss to the company during the year, from errors and defalcations, of only \$110. During the same time a larger sum has accumulated in the treasury of the company from cases where it was impossible to find either the transferee or the person making the deposit for transfer. This branch of the service is under the immediate charge of Vice-President Mumford, who prepared the rules and regulations for the conduct of the business. In view of the success which has attended their operation, this specific acknowledgement seems to be due to him.

THE NEW BUILDING.

At the close of the fiscal year, June 30, 1874, the account with the new building presented the following exhibit:

Paid on account of real estate.....	\$855,000 00
Paid to architects and contractors.....	683,511 25
Paid engraving, printing, commission on sale and other expenses of negotiating the bonds.....	17,190 81
Taxes.....	21,359 56
Interest on bonds.....	204,143 19
	\$1,781,234 81

Of this sum \$1,500,000 is represented by the bonds of the company due in 1902, and the balance, \$281,234.81, has been paid out of current earnings. To the latter may now be added the further sum of \$153,060.98, paid during the quarter ended September 30, making a total of \$434,315.79, for which the building account is indebted to income account.

The work on the building was greatly delayed during last Fall and Winter by the failure of the contractors to supply the granite at the rate agreed upon, and later, by delay in the delivery of other materials. The work is now progressing rapidly, and it is expected the portion to be occupied by the company will be ready by Christmas.

GENERAL REVIEW.

A comparison of the results of the company's operations during the last fiscal year and the one preceding, shows a reduction of \$70,464.53 in gross receipts, and of \$251,942.54 in the net profits.

The diminution of receipts and profits resulted from two causes: first, the reduction of rates, which took place on July 1, 1873, pursuant to plans formed and instructions issued six months before; and second, to the financial panic of September, 1873, and the general stagnation in every department of business which immediately followed, and from which there has been but a partial recovery.

The fiscal year is from July to June, both inclusive. A comparison of the business of the calendar years 1873 and 1874 shows that the profits of the nine months of 1874 ended September 30 are in excess of the twelve months of 1873; the excess during the seven months ended September 30 being \$649,434.73 over the corresponding seven months of 1873—an average increase of over \$100,000 a month.

The number of messages transmitted during the last year was 16,329,255, being an increase of 1,672,424 (about 12 per cent.) over the preceding year. Deducting from the gross receipts moneys received from other sources than for the transmission of messages, and dividing the remainder by the number of messages, it appears that the average receipt for each message was about 55 cents.

Grand Rapids & Indiana.

This company owns a line from Fort Wayne, Ind., northward to Potosky, Mich., on Little Traverse Bay, 331 miles. It operates under lease the Cincinnati, Richmond & Fort Wayne road, from Fort Wayne southward to Richmond, 91 miles, and it also operates, but without any definite lease, the Traverse City road, from Walton, Mich., west by north to Traverse City, 26 miles. Of the main line 76 miles, from Walton to Potosky, was not operated until May 24, 1874, when regular trains began to run.

The road was built by the Continental Improvement Com-

pany, and the completed portions operated by that company during construction. The contractors tendered the line to the Grand Rapids & Indiana Company as completed, December 6, 1873. After a thorough examination by the committee appointed by the board of directors the road was accepted January 14, the transfer to date back to December 1. The road was thus operated for five months of the fiscal year by the contractors and even months by the company. Separate statements for these periods are made in the report.

The property is represented as follows:

Stock (\$8,450 per mile)	\$2,800,000
Guaranteed bonds (\$12,085 per mile)	4,000,000
Unsecured bonds (\$12,085 per mile)	4,000,000

Total (\$32,629 per mile).....\$10,800,000

The annual interest charge is \$500,000, or \$1,692 per mile. The company had a land grant of about 1,160,000 acres, which was paid to the contractors as part of the consideration for the construction of the road.

The earnings of the road for the year ending June 30 were as follows:

	1873-74.	1872-73.
Passengers.....	\$380,026 41	\$392,463 08
Freight.....	655,479 22	659,022 45
Other expenses.....	118,896 28	62,711 90
Total earnings.....	\$1,129,401 88	\$1,114,197 43
Operating expenses.....	735,552 05	789,062 26
Net earnings.....	\$393,849 83	\$325,135 17
Gross earnings per mile.....	\$5,815 55	\$4,369 40
Net earnings per mile.....	1,350 67	1,375 04
Per cent. of expenses.....	65.10	70.80

The increase in earnings was \$15,204.45, or 1.36 per cent.; the decrease in expenses, \$53,510.21, or 6.78 per cent.; the increase in net earnings, \$68,714.68, or 21.13 per cent. The earnings per mile decreased \$553.85, or 12.68 per cent., a result accounted for by the large mileage of new and comparatively unproductive road.

The number of passengers carried was 456,140; passenger mileage, 11,692,457. The tons of freight moved were 363,478; tonnage mileage, 30,913,216. Of the passenger mileage 50.27, and of the tonnage mileage 86.07 per cent was on southward-bound trains. Lumber was 75.85 per cent. of the tons of freight carried.

The mileage of locomotives on passenger trains was 396,198 miles; freight, 693,822; other trains, 66,401; total, 1,066,419 miles, a decrease of 38,117 miles from the previous year. The average earnings per train mile of passenger and freight trains were \$1.129; the expenses, \$0.735; profit, \$0.394.

The contract of settlement with the Continental Improvement Company showed a balance due them of \$22,500, after taking into account all property on hand and deducting work unfinished.

A considerable amount of new iron will be needed this year on the older portions of the road. During the year 17,088 new ties were put down, and 92 miles of fence built.

The Traverse City road has been thus far operated, but without any definite lease or contract.

The earnings of the leased Cincinnati, Richmond & Fort Wayne road for the year were: 1874, \$271,247.05; 1873, \$230,006.71; increase, \$41,240.34, or 17.9 per cent. For the seven months from December 1 to June 30 the operations were as follows:

	1874.	1873.
Earnings.....	\$157,812.26	\$138,880.18
Expenses.....	102,274.30	94,982.70
Net earnings.....	\$55,537.96	\$43,897.48
Earnings per mile.....	\$1,734.20	\$1,526.16
Per cent. of expenses.....	64.81	68.37

The increase in earnings was \$18,932.08, or 13.63 per cent.; in expenses, \$7,321.60, or 7.50 per cent.; in net earnings, \$11,610.48, or 26.43 per cent. Included in expenses for 1874 was \$11,000 interest on equipment and advances, which properly belonged in the preceding year. It is not doubted that the road will become self sustaining during the present year.

St. Louis & Iron Mountain.

The report of this company for 1873 covers the following lines:

	Miles.
St. Louis to Belmont.....	196
Bismarck (76 miles south of St. Louis) to Moark.....	110
Mineral Point to Potosi.....	4

Total.....310

Of the line from Bismarck to Moark, 99 miles, from Pilot Knob to Moark, was owned by the Arkansas Branch Company, a separate corporation, though the stockholders were the same as those of the St. Louis & Iron Mountain. Of this line the 20 miles from Poplar Bluff to Moark were not worked by the company until after April 2.

Since the close of the year the St. Louis & Iron Mountain and Arkansas Branch Companies have been consolidated with the Cairo, Arkansas & Texas and Cairo & Fulton and a new company formed known as the St. Louis, Iron Mountain & Southern.

At the close of the year the property was represented as follows:

St. Louis & Iron Mountain stock (\$47,393 per mile).....	\$10,000,000
Funded debt (\$40,863 per mile).....	8,622,000

Total (\$88,256 per mile).....\$18,622,000

Arkansas Branch stock (\$35,242 per mile).....	\$2,499,000
Funded debt (\$25,253 per mile).....	2,500,000

Total (\$60,495 per mile).....\$4,999,000

Total both lines (\$76,197 per mile).....\$23,621,000

For the year 1873 the earnings and expenses were as follows:

	1873.	1872.
Freight.....	\$1,667,041 58	\$1,673,672 91
Passengers and other sources.....	556,532 48	473,845 22
Total earnings.....	\$2,223,574 06	\$2,147,518 13
Operating expenses.....	1,626,649 55	1,469,399 82
Net earnings.....	\$596,924 51	\$678,118 31
Gross earnings per mile.....	\$7,290 41	\$10,040 43
Net earnings per mile.....	2,279 77	3,339 59
Per cent. of expenses.....	68.74	67.90

The report for 1872 does not include the earnings of any part of the Arkansas Branch, which was under construction during that year. The comparatively small earnings from that line necessarily reduced the earnings per mile for 1873, which, excluding the Arkansas Branch, were \$9,376.04.

The work of the year was as follows:

	1873.	1872.
Passenger train mileage.....	462,140	363,707
Freight train mileage.....	537,276	582,315
Freight train mileage.....	639,300	679,686
Tons of freight carried.....	682,903	635,574
Tonnage mileage.....	60,246,970	68,528,962

The decrease in tonnage mileage was 13½ per cent., and this, with the increase in the number of tons moved, indicates an increase in local and a decrease in through business. The number of cars ferried across the Mississippi between Belmont, Mo., and Columbus, Ky., was: Passenger train cars, 6,154; loaded freight, 14,136; empty freight, 3,335; total, 23,625 cars of all kinds.

Improvements during the year included 20,244 miles new

second track and sidings; three new engine houses, one for 16 engines at De Soto, one for 11 at Carondelet and one for 4 at Piedmont; freight house and new platforms at St. Louis; four new turn-tables, and a transfer table 140 feet long, the latter at Columbus; coal bins at Blackwell and a number of lesser buildings. Six bridges have been renewed or repaired and a large amount of repairing done on the trestle work near Belmont. Much work has been done filling in the company's property in St. Louis, and 137.8 miles of fence were built along the road.

During the year 15 engines, 40 flat and 9 caboose cars were purchased and two baggage cars built. The equipment at the close of the year consisted of 98 locomotives; 10 first-class, 11 second-class passenger, 2 sleeping, 1 directors', 15 baggage, mail and express and 2 of Blood's day cars; 295 box, 447 Green Line box, 67 stock, 761 flat, 50 combination box and 47 caboose cars; 1 boarding, 1 derrick and 7 dump cars.

The report, which is very long, includes a history of the company from its first organization, and is of much interest.

Legitimate Regulation of Railroads.

A correspondent of the *Nation*, writing from Chicago, has sought to excuse the legislation in Wisconsin, not as just in itself, but as the expression of a community suffering great oppressions from the railroad companies; lacking knowledge to frame a just measure of restriction, but determined (and justifiably so) to demonstrate its power and intention to restrict the charges of the carriers. Of his two letters, the latter quite long, the greater part is devoted to arguing that the people who have compelled the enactment of restrictive laws do not desire to do any injustice to railroad proprietors, and do not believe that they have done any; which is, doubtless, generally true, but yet does not prove the morality of their action. The fact is that the people of the Northwest not only, for the most part, know very little, but they care very little for the rights of railroad proprietors, not because of any unusual disrespect for the rights of others, but because those others are a great way off and there is no one at hand to urge their rights and demonstrate in person the suffering and injustice caused by measures which deprive them of an income, or an adequate income on their investments. Northwestern farmers are not sensitive to injustice suffered by New York or Amsterdam stockholders, just as they and all the rest of the nation felt very little active sympathy for the sufferers of the financial crisis in Vienna a year and a half ago, or for the victims of the famine in India. The *Nation's* correspondent closes his last letter by the following inquiries:

"If the *Nation* really wishes to assist thoughtful men at the West to see what is right in this matter, it will dismiss the notion that a majority of us are rogues or fools, and candidly discuss for us such questions as these:

"How can the State insure equitable railroad charges with the least restriction of the freedom of trade? How can it insure the economical administration of railroad revenues in the interest of shareholders? Shall the State allow charges to be high enough, if possible, to pay interest on funds misapplied by the directors? If so, shall such interest be paid only to Eastern and foreign investors who are the present owners of the roads, or shall some way be found to recompense the persons and communities along the roads who have usually constructed the road-bed, and lost their legal claim when it was sold for the benefit of the mortgagees who furnished the iron? If interest is to be paid only on capital properly invested, what methods shall be followed, and what principles shall guide in determining what has been stolen or squandered, and what has been properly applied?"

"On these and similar questions nobody can give us more light than the *Nation*—if it will."

It is chiefly on account of its answers to these questions that we copy the following article from the *Nation*, in which, however, it has something to say on the morality of the "Granger" legislation:

This Wisconsin law has been discussed so much in our columns of late that we shall refrain from saying a great many things which Mr. Adams' letter in another column suggests, and are quite content to accept his history of the "Potter law" as accurate. There are a few observations on it which, however, we feel bound to make:

1. He defends the Farmer's honesty at the expense of his knowledge and common sense. This is not reassuring to investors in Wisconsin, seeing that the farmers there at least hold the balance of power. It matters little to me, for practical purposes, whether I place my property in the power of a designing knave or of a passionate fool. If the accounts which have been sent on to the *New York Tribune* by its correspondent, speaking for the Grangers, and which Mr. Adams gives us of Granger notions of rights and duties, be correct, we repeat that it is not safe to hold any immovable property at their mercy. A man who considers bonds to be "devices by which certain people called bondholders get railroad construction gangs to double honest farmers' taxes," may be a good fellow, and may mean well, but if he gets absolute control of the government of a civilized State, people with money to invest will do well to give him a wide berth.

2. "The people of the West who are struggling to get the railroads, as a whole, to submit to be governed by law," appear to forget that on the two points on which they are most excited—"unreasonable rates" and "unjust discrimination"—the railroads are already governed by law, or might be. They are and always have been common carriers, which have been from time immemorial forbidden by the common law to charge unreasonable rates or to discriminate between forwarders of freight. What was wanted, therefore, was not a new law, but better machinery for enforcing the old one. There was needed also, however, owing to the novelty of railroads and the complexity of their management and of their operating expenses, and of their relations to the community, a new definition of reasonable and of discrimination. Anybody could have told in Coke's day what was reasonable for a carrier to charge for conveying goods in his wagon. Every man who owned a horse was an expert on that point, and competition was open and easy. But the elements which enter into railroad charges are so varied, so obscure, and burdened with such a variety of considerations, that the fixing of them has become one of the most difficult of modern occupations. If the law is to undertake the creation of any standard, it ought to be drawn, after the most careful inquiry, by disinterested and skilled men, and not by a politician from a county "which does not possess a railroad of any kind, and who is said to be without experience in railroad matters."

3. The railroad is, however, not only a common carrier—it is a public highway of a novel and peculiar kind. The great function it discharges toward modern society, and the one which has produced the most striking social and industrial results, is the equalization of distances from the great markets. That is to say, the most valuable and important thing it has done for the world is the putting of producers who live far away on an equality with those who live near by. It is

this which has created the wonderful industrial activity which we are now everywhere witnessing. It has absolutely called the West into existence, by enabling the Illinois and Wisconsin farmer to sell in New York and Liverpool at as low rates as the Pennsylvania or English farmer. Now, this result has been and is achieved solely by "discrimination," which seems on the surface to the enraged and ill-informed farmer to be unjust, but which is in reality both wise and just, and ought to be encouraged as a matter of public policy. The evidence given on this point before the English Railroad Commission, three or four years ago, showed that, without discrimination in favor of localities far from London, vast manufacturers in the interior would be destroyed, and thousands of operatives thrown out of employment through inability to compete with producers near the market and on the seaboard. Illustrations vastly more forcible than this might be adduced from the history of our own railroads. There ought, therefore, to be discrimination, and it will be found that, on the whole, the interests of railroads on this point coincide with those of the public. That is, whatever discrimination the managers make with the view of swelling the volume of their own business, will probably be that which will most promote the general welfare. When, therefore, the farmer demands that the railroad shall charge at the same rate for carrying goods from St. Paul to Milwaukee that it charges for conveying them from St. Paul to New York, even if the rate of cost were actually the same, which it is not, he ought not to be listened to any more than the good-for-nothing bricklayer who asks that no bricklayer shall be allowed to lay more bricks in a day than weak and lazy bricklayers find convenient. We are now, of course, talking of honest discrimination on business principles. Discrimination in favor of individuals or firms, or vindictive discrimination against particular places, we would treat as criminal and punish by heavy penalties; and this is where legislators eager for work might find a field for thoughtful activity.

4. The clamor about the amount of stock and bonds with which railroads are saddled, and on which "the farmer has to pay interest," we hold to be in the main senseless, and an illustration of the part words often play in darkening counsel. Railroads have been for the last forty years constructed in the United States on the only theory on which they could have been constructed, viz., that they were an extremely hazardous speculation, particularly in the sparsely settled frontier regions. There, a large portion of them were constructed, not to meet the wants of busy communities like New York and Philadelphia, or Liverpool and Manchester, but to open the way through a wilderness for a possible population. To have offered such undertakings to practical business men, therefore, as an ordinary investment, would have been preposterous, and have excited laughter. They were therefore offered as enterprises containing enormous risks, but at the same time holding out some prospects of very high profits. They in fact bore in their commercial aspects a close resemblance to blockade-running. In most cases, however, the prospect of profit was not sufficiently strong to induce moneyed men to touch them at all without aid in the shape of land-grants or money, which were offered and accepted as business transactions. The rate at which the bonds were sold, and the amount of bonus given in stock to purchasers, were controlled by the same great fact—the unwillingness of prudent people to buy them at all, or, in other words, the commercial rule that you must sell very low what but few persons want. So that, after brushing away all the rant about "loads of indebtedness," "watered stock," "greedy speculators," "impoverished farmers," "grinding taxation," we get at the naked truth of the whole matter, which is, that money used in Western railroad-building had, owing to the risky nature of the enterprise, to be borrowed from people of a speculative turn, at a very heavy discount. Business men have this experience every day; but when, after having got the money and used it on the terms offered by themselves, they are called on to pay, they do not begin to weep and call names.

5. Not only, however, had the Western railroads to be constructed as hazardous undertakings, but they had to be constructed on the theory that they were and would remain private property. This was the theory of the American law, and the theory which best accorded with American manners. There was really no place in either our jurisprudence or our politics for great works of this kind owned by the State. The New York canals were an experiment of a very novel kind in the European direction, which met with success at the outset, but which have not on the whole worked well, of which no rational man would now advise the repetition. Moreover, it was a necessary theory, and no money would have been got for railroads on the understanding that the people living along the line were to have a voice in the management of them, and that the mode of working them was to be settled every election at the polls. The private-property theory was therefore part of the contract between the projectors and the community, and was fortified by our judicial rules and political usages. The theory that the railroads are somehow the property of the people who use them is a new theory, which may be a wise one, but which, if enforced against the present proprietors without compensation, would have all the signs and consequences of a swindle, particularly as the original wicked projectors have now for the most part passed away, and the property lies in the hands of that class of which the law is so careful—"innocent third parties without notice." The discoveries of that eminent legislator and moralist, Mr. Matt. Carpenter, and of many other Western demagogues, on this subject, are painful reading for honest and patriotic men.

6. But what if the community is dissatisfied now with this theory, and feels that it is prejudicial to morals and industry, and that it needs modification, and that justice and public policy require that the "unearned increment" in the value of railroad property, created by the growth of population and trade, should go to the public in the shape of lower charges or better accommodation, and not to the stockholders in the shape of increased dividends or watered stock? Is not this a reasonable view? Perfectly reasonable. The arguments for and against would have, it seems to us, to be drawn altogether from considerations of expediency. When we come to examine the mode in which the State should reach this consummation, we find it in a position strikingly analogous to that of a government which has borrowed money in a time of war at a heavy rate of interest, and wishes, in more prosperous days, to reduce this rate. To lower it by force is universally acknowledged to be robbery. What honest governments do under such circumstances is to give the creditor the option of taking new bonds at the reduced rate or being paid off. And what the State which wishes to change the theory on which the railroads are administered should do, is to draw up its railroad code, and tell any stockholder who does not like to invest his money under it that if he is dissatisfied he can have the full value of his stock under the theory of railroad property which was held when he bought it. If the code was found likely to be well administered, and the rate of profit allowed reasonable, few regular investors would withdraw, and railroad stock would become what Government bonds are—the refuge of trustees, widows, and prudent people generally.

7. As regards the work which the State might and ought properly to do for the regulation of railroads under any theory of railroad property, we may mention the following, as at least some of the duties which plainly devolve on it: (a) The provision of a regular system of railroad bookkeeping, to which all railroads should be compelled to adhere, departure from which should be treated as criminal fraud, and with which the public could make itself familiar, so as to prevent the concealment of the real condition of the road by peculiar modes

of crediting and charging, which are now a fertile source of deception; (b) compelling the publication of the accounts thus kept at stated intervals, with the working expenses and net receipts stated under oath; (c) the registry of all railroad contracts in books accessible to the public, and the prohibition as criminal of all interest of directors in such contracts; (d) the prohibition of all discrimination in favor of individuals or firms, and the granting of free passes; (e) the examination of discrimination in charges by competent persons, for the purpose of ascertaining whether it is justifiable on business grounds, without regard, however, to its aspect in the light of "eternal justice;" (f) the provision of increased protection for the minority, by making the votes of a larger number of shares than a bare majority necessary for the authorization of certain designated acts; and the curtailment of the arbitrary power of the President.

Of course, if the State undertook to fix a maximum of profits, it would have to see, by some system of inspection, that the surplus was really applied to lowering rates and improving accommodation. We do not pretend that there is anything very original or complete in the above suggestions. We throw them out simply as illustrations of the kind of work there is for statesmen to do in this "transportation problem," and as reasons why gentlemen "who live in counties which do not possess a railroad, and who are said to be without experience in railroad matters," like the eminent Potter of Wisconsin, should, to use a bit of political slang, "take a back seat in the rear car."

Railroad Finances and Defaults.

From the *Commercial and Financial Chronicle* of October 10 we copy the following interesting table, which can be studied with profit. The *Chronicle* adds notes concerning the latest phases in the negotiations between the companies and their bondholders, etc., which the latter will find valuable:

In January, 1874, there was published in the *Chronicle* a list of railroads which were then in default for interest on their funded debt; the total number of roads was 80, and the whole amount of bonds on which interest had been passed was \$386,403,668. As one year has now elapsed since the commencement of the panic of last Fall, which was pre-eminently a railroad panic, it seems to be an appropriate time to take a review of the situation and inquire into the present condition of railroad finances. On a careful examination into the affairs of every company that has within several years past been in any financial difficulty, we find that the number of companies which have passed interest on any bonds and have not yet finally adjusted their affairs is now 108, against 89 in January last; and the whole amount of bonds so passed is \$497,807,660, against \$386,403,668 at that time. It would be great injustice to many of the railroads not to mention in this connection that a large number of those included in the table below have already funded the greater part of their coupons and have an adjustment of their affairs now well assured, and in bringing them into the list we have had the sole purpose of showing the total amount of bonds on which any interest has been passed since last year, by companies which have not yet entirely finished up the settlement of their affairs and resumed interest payments according to their respective agreements.

It is an erroneous conclusion to assume that all these defaults have been the direct consequence of the panic. On the contrary, the dates in the tables show that a large number of them occurred long prior to September, 1873, and some of them as much as three and four years ago. An analysis shows that out of the 108 companies, 34 had passed their interest on some or all of their bonds several months at least before the panic came, and these had bonds amounting to \$144,807,000 out of the whole \$497,807,660, or about 30 per cent. of the total amount. It should be clearly understood that a large part of the increase in the list of January last comes from the addition of other issues of bonds, belonging to companies which had then passed interest on some bonds, but had other issues on which the interest period had not at that time come around. Thus it appears that the number of separate companies which have defaulted since the January list is only 30, as 11 have gone off that list on account of their resumption, foreclosure or final settlement with bondholders, reducing it to 78, and the addition of 80 new roads brings up the present list to 108.

In our former article we assumed the whole railroad debt of this country to be in round numbers, \$1,950,000,000; this may have been a slight over-estimate at that time, but would be more nearly correct at present, and on this basis the bonds on which interest is, or has recently been, in default would amount to about 25 per cent. of the whole. On the best information which can be obtained, we believe that about \$150,000,000 of the bonds in default, or 30 per cent. of the whole amount, are held abroad, and as the total amount of our railroad bonds held abroad may be estimated at \$375,000,000, it follows that 40 per cent. of them have been in default. This shows that the foreigners have been unfortunate in their selections, and accounts for the excitement and demoralization, particularly on the Continent of Europe, on the subject of all American railroad securities.

The progress made towards settlements has in many cases been rapid and satisfactory; bondholders have been liberal, and the managers presenting a fair proposition for funding, it has generally been accepted. On twenty-five roads only is active litigation looking to foreclosure in progress, and on most of the others a funding arrangement or other amicable settlement is pending. One company, the Atlantic, Mississippi & Ohio, has resumed the payment of full interest on its bonds, having funded one coupon only. The Atchison, Topeka & Santa Fe road completed a speedy settlement, as its bonds were held by a few parties. The following roads have been sold in foreclosure, viz.: The Cayuga Lake, Lake Ontario Shore, South Side of L. I., St. Louis & St. Joseph, Sunbury & Lewistown, Springfield & Illinois Southeastern. The Des Moines Valley road has been reorganized under two separate corporations.

TABLE SHOWING RAILROADS IN THE UNITED STATES NOW IN DEFAULT FOR NON-PAYMENT OF INTEREST ON THEIR BONDED DEBT.

NAME AND DESCRIPTION.	Amount of Bonds.	Rate per cent.	Date of first default.
Alabama Central—			
1st mortgage	1,600,000	8	Jan., 1873
Alabama & Chattanooga—			
1st mortgage, gold, guaranteed by Ala.	5,230,000	8 g.	July, 1872
Receiver's certificates	1,200,000	8	

"For's Manual" does not give the aggregate funded debts of the railroads separately from the floating debt, but the floating debts are given for each State. By adding these and subtracting the sum from the aggregate funded and floating debt of the 66,237 miles of railroad whose accounts are reported in the Manual, we find the aggregate funded debt to be \$1,681,579,071. But besides this mileage, there were 4,414 miles of railroad of whose finances the Manual had no account. The average funded debt of these probably do not exceed \$25,000 per mile, and at that rate they amount to \$110,350,000. This would make the total bonded debt of United States railroads early this year \$1,791,929,000. We have built but about 1,100 miles of railroad this year, and probably have not sold \$30,000,000 of bonds since the Manual was compiled, and if this is true the total bonded debt of the railroads of the United States at this date is not more than \$1,821,929,000, and the proportion in default is nearly 37 per cent.—

[EDITOR RAILROAD GAZETTE.]

NAME AND DESCRIPTION.	Amount of Bonds.	Rate per cent.	Date of first default.	NAME AND DESCRIPTION.	Amount of Bonds.	Rate per cent.	Date of first default.
Arkansas Central—				Macon & Brunswick—			
1st mortgage, gold	720,000	8 g.	Jan., 1874	1st mortgage, State indorsed bonds	2,330,000	7	1873
Atchison & Nebraska—				2d mortgage	1,100,000	7	Oct., 1871
1st mortgage	2,750,000	8	Sept., 1873	Equipment bonds	150,000	7	Oct., 1871
Atlanta & Richmond Air Line—				Mayville & Lexington—			
1st mortgage	4,248,000	8	Jan., 1874	1st mortgage	800,000	7	July, 1873
Atlantic & Great Western—				Memphis & Little Rock—			
1st mortgage	14,414,977	7 g.	July, 1874	1st mortgage land grant	1,300,000	8	Nov., 1872
2d mortgage	8,707,200	7 g.	Sept., 1874	2d mortgage	1,000,000	..	..
Atlantic & Pacific—				Michigan Lake Shore—			
1st mortgage A. & P. land grant	3,000,000	6 g.	Jan., 1874	1st mortgage	800,000	8	Jan., 1873
2d mortgage A. & P.	3,000,000	6 g.	May, 1874	Milwaukee, Lake Shore & Western—			
1st mortgage Central Division	1,200,000	6 g.	May, 1874	1st mortgage, gold	3,500,000	7 g.	Dec., 1873
Interest scrip	1,718,000	6 g.	Jan., 1874	Mississippi, Ouachita & Red River—			
Boston, Hartford & Erie—				1st mortgage, gold	500,000	7 g.	..
Berwick mortgage (\$5,000,000 guaranteed)	20,000,000	7	July, 1869	Missouri, Kansas & Texas—			
Brunswick & Albany—				1st mortgage on road and land	3,200,000	6 g.	Jan., 1874
1st mortgage, gold, endorsed	800,000	6 g.	1873	1st mortgage, gold, Tebo & Neosho	350,000	7	Dec., 1873
2d mortgage, gold, not endorsed	350,000	7 g.	1873	Consolidated mortgage	13,504,400	7 g.	Feb., 1874
Burlington, Cedar Rapids & Minnesota—				Missouri River, Fort Scott & Gulf—			
1st mortgage, gold, sinking fund	5,400,000	7 g.	Nov., 1873	1st mortgage, land grant	5,000,000	10	Jan., 1874
1st mortgage, gold, Milwaukee Division	2,200,000	7 g.	Feb., 1874	2d mortgage, gold	2,000,000	10	Oct., 1873
Income and Equipment	..	..	..	Mobile & Alabama Grand Trunk—			
Burlington & Southwestern—				1st mortgage, endorsed	880,000	8 g.	July, 1872
1st mortgage, coupon or registered	2,100,000	8	Nov., 1873	Mobile & Montgomery—			
Canada Southern—				1st mortgage, gold, endorsed by Ala.	2,500,000	8 g.	May, 1873
1st mortgage	9,000,000	7 g.	Jan., 1874	2d mortgage, not endorsed	1,000,000	8	..
Cairo & St. Louis—				Montclair of New Jersey—			
1st mortgage	2,500,000	7	Oct., 1873	1st mortgage, gold, guar.	1,800,000	7 g.	Sept., 1873
Cairo & Vincennes—				2d mortgage	1,500,000	7	July, 1873
1st mortgage, gold	3,500,000	7 g.	April, 1874	Income bonds	888,000	7	..
California Pacific—				Monticello & Port Jervis	800,000	7 g.	April, 1873
Extension mortgage	2,500,000	..	July, 1874	Montgomery & Eufaula—			
Income bonds	1,800,000	..	..	1st mortgage, not endorsed	1,040,000	8 g.	Feb., 1873
Central of Iowa—				1st mortgage or equipment bonds	330,000	8	Jan., 1873
1st mortgage, gold, coupon	3,700,000	7 g.	July, 1873	New Haven, Middletown & Willimantic—			
2d mortgage, gold	925,000	7 g.	April, 1873	1st mortgage	3,000,000	7 g.	Nov., 1872
Cheapeake & Ohio—				2d mortgage	880,000	7	Jan., 1872
1st mortgage, sinking fund, gold	12,364,905	6 g.	Nov., 1873	New Jersey MI land—			
Other bonds, various issues	7,012,587	7	Jan., 1874	1st and 2d mortgages	4,500,000	7 g. & 7	Jan., 1874
Chester & Tamarac (Ill.)—				New Jersey Southern—			
1st mortgage, gold	660,000	7 g.	1873	1st mortgage	2,120,000	7	Nov., 1873
Chicago & Canada Southern—				2d mortgage	1,000,000	7	Sept., 1873
1st mortgage, gold, for \$8,000,000	2,901,000	7 g.	Oct., 1873	Maryland & Delaware, 1st and 2d mortgages	1,000,000	6	May, 1872
Chicago, Clinton & Dubuque—				New Orleans, Mobile & Texas—			
1st mortgage	1,800,000	8	Dec., 1873	1st mortgage bonds, both divisions	11,250,000	8	Jan., 1873
Chicago, Danville & Vincennes—				New York, Boston & Montreal—			
1st mortgage, main line	2,500,000	7 g.	Oct., 1873	1st mortgage	6,250,000	6 g.	Aug., 1874
1st mortgage, Indiana extension	592,000	7 g.	Oct., 1873	New York, Kingston & Syracuse—			
Chicago, Dubuque & Minnesota—				1st mortgage	2,250,000	7 g.	Jan., 1874
1st mortgage	3,325,000	8	Dec., 1873	New York & Oswego Midland—			
Chicago & Michigan Lake Shore—				1st mortgage	8,000,000	7 g.	Jan., 1874
1st mortgage	3,300,000	8	July, 1873	2d mortgage	4,000,000	7	Nov., 1873
1st mortgage	1,350,000	8	Nov., 1873	2d mortgage or equipment bonds	3,800,000	7	Nov., 1873
1st mortgage, on branch	1,300,000	8	Sept., 1873	Western extension	2,425,000	7	..
Chicago & Southwestern—				Northern Pacific—			
1st mortgage, gold, not guaranteed	1,000,000	7 g.	June, 1873	1st mortgage, land grant	30,000,000	7.30	Jan., 1874
Cleveland, Mount Vernon & Del—				Oil Creek & Allegheny River—			
1st mortgage, gold	2,300,000	7 g.	July, 1874	Consol. mortgage	1,100,000	7	May, 1874
Columbus, Chicago & Indiana Central—				Oregon & California—			
2d mortgage	5,000,000	7	Aug., 1874	1st mortgage	10,800,000	7 g.	Oct., 1873
Dallas, Urtinas, Bloomington & Pekin—				Peoria & Rock Island—			
1st mortgage	2,000,000	7 g.	Oct., 1874	1st mortgage	1,500,000	7 g.	Aug., 1874
Davenport & St. Paul—				Petersburg—			
1st mortgage, gold	3,140,000	7 g.	Jan., 1874	Bonds	840,000	8	July, 1874
Detroit, Eel River & Illinois—				Philadelphia & Baltimore Central—			
1st mortgage	1,926,000	8	Jan., 1874	1st mortgage, Pa.	800,000	7	..
Detroit, Hillsdale & Indiana—				2d mortgage, Pa.	400,000	7	..
1st mortgage	1,170,000	8	June, 1873	1st mortgage, Md.	300,000	6	..
2d mortgage	300,000	8	July, 1873	Pittsburgh, Washington & Baltimore—			
Detroit & Milwaukee—				1st mortgage, sec. Turle Creek	4,400,000	6 & 7	July, 1874
1st mortgage	2,500,000	7	Nov., 1873	2d mortgage to Baltimore City	2,937,000	6 g.	July, 1873
2d mortgage	1,000,000	8	Nov., 1873	Plymouth, Kanabec & Pacific			
2d mortgage, funded coupons	377,000	7	Nov., 1873	1st mortgage	250,000	7	1872
Oakland & Ottawa, sterling loan	155,000	6 g.	Nov., 1873	Port Royal—			
do. dollar loan	51,000	7	Nov., 1873	1st mortgage, not guaranteed	1,500,000	7 g.	Nov., 1873
1st funded coupons	628,525	7	Jan., 1874	Poughkeepsie & Eastern—			
Bonds of June 30, 1866	1,695,351	6 & 7	Jan., 1874	1st mortgage	500,000	7	Jan., 1873
2d mortgage (D. & P.)	100,000	7	Jan., 1874	Rockford, Rock Island & St. Louis—			
Other issues, small	100,000	..	1874	1st mortgage, gold	9,000,000	7 g.	Feb., 1874
Dutchess & Columbia—				St. Joseph & Denver City—			
1st mortgage	2,500,000	7	July, 1871	1st mortgage, gold, Eastern Division	1,500,000	8 g.	Feb., 1873
Fort Wayne, Jackson & Saginaw—				1st mortgage, Western Division, land grant	5,500,000	8 g.	Feb., 1873
1st mortgage	1,500,000	8	Jan., 1874	St. Louis, Lawrence & Denver—			
2d mortgage	500,000	8	April, 1874	1st mortgage, gold	1,020,000	6 g.	April, 1873
Fort Wayne, Muncie & Cincinnati—				St. Louis & South-eastern—			
1st mortgage, gold	1,800,000	7	Oct., 1872	1st mortgage, gold, convertible	3,250,000	7 g.	Nov., 1873
2d mortgage	500,000	8	Oct., 1872	Evansville, Henderson & Nashville, 1st mortgage	1,000,000	7	Jan., 1874
Frederick & Pennsylvania—				Consolidated mortgage, gold	2,000,000	7 g.	Feb., 1874
1st mortgage	250,000	6 g.	Oct., 1873	St. Paul & Pacific—			
Gilman, Clinton & Springfield—				1st mortgage, Western or main line	3,000,000	7 g.	May, 1873
1st mortgage, gold	2,000,000	7 g.	Jan., 1874	2d mortgage, Western or main line, land grant	6,000,000	7 g.	Nov., 1873
2d mortgage, gold	1,000,000	8 g.	Jan., 1874	2d mortgage and land grant	1,200,000	7	Dec., 1873
Indiana & Illinois Central—				Branch 1st mortgage	120,000	8	Sept., 1873
1st mortgage	1,955,000	7 g.	Jan., 1874	2d mortgage on 80 miles, and 1st 307, 200 A	1,200,000	7	June, 1873
Indianapolis, Bloomington & Western—				1st mortgage, Pa. & Pacific	15,000,000	7 g.	..
1st mortgage	3,000,000	7 g.	Oct., 1874	Savannah & Memphis—			
2d mortgage	1,500,000	8	July, 1874	1st mortgage (endorsed by Alabama)	1,950,000	8 g.	Nov., 1873
Extension	5,000,000	7 g.	July, 1874	Savannah & Charleston—			
International & Great Northern—				Various issues	1,100,000	6 & 7	Mar., 1874
Convertible mortgage	3,180,000	8	Aug., 1874	Selma & Gulf—			
Jacksonville, Pensacola & Mobile—				1st mortgage (guaranteed by Alabama)	640,000	8	April, 1872
1st mortgage to the State	4,000,000	8	July, 1873	Selma, Marion & Memphis—			
Jersey City & Albany—				1st mortgage (endorsed by Alabama)	800,000	8	Mar., 1872
1st mortgage, Rockland Central	250,000	7	Nov., 1873	Selma, Rome & Dalton—			
1st mortgage, Ridgefield Park	250,000	7	Nov., 1873	Receiver's certificates	4,000,000	7	1871
Kansas City, St. Joseph & Council Bluffs—				2d mortgage (Alabama & Tennessee Rivers)	241,000	8	1871
St. Joseph & Council Bluffs R. R., 1st mortgage	1,400,000	10	Sept., 1873	General mortgage	5,000,000	7	Oct., 1871
St. Joseph & Council Bluffs R. R., convertible	525,000	8	Dec., 1873	Equipment bonds	230,000	10	1871
Kansas City, St. Joseph & Council Bluffs, convertible mortgage	657,500	8	Sept., 1873	Shelbyville & Fond-du-lac—			
New consolidated mortgage	947,000	8	Aug., 1873	1st mortgage	750,000	7	June, 1873
1st mortgage, C. B. & St. J.	500,000	7	Jan., 1874	1st mortgage, extension	694,000	8	April, 1873
Kansas Pacific—				Southern Minnesota—			
1st mort. land grant, 3,000,000 acres	6,455,000	7 g.	Nov., 1873	1st mortgage	1,500,000	7	June, 1869
1st mort. land grant, 140 miles	4,068,000	6 g.	Dec., 1873	2d mortgage	700,000	7	April, 1874
1st mortgage, coupon (Leavenworth Branch)	600,000	7	Nov., 1873	Western of Alabama—			
Land bonds on 2,000,000 acres	1,821,250	7 g.	Jan., 1874	Bonds not guaranteed	1,350,000	8	April, 1874
Other issues	8,261,000	6 & 7	Feb., 1874	Wilmington & Reading—			
Kent County—				2d mortgage	1,750,000	7	Jan., 1874
1st mortgage	400,000	6	Jan., 1874	Wilmington & Western (Del.)—			
Lake Erie & Louisville—				1st mortgage	500,000	8	Sept., 1874
1st & 2d mortgages	890,000	7	1874				
Lake Shore & Tuscarawas Valley—							
1st mortgage	2,000,000	7	Sept., 1874				
2d mortgage, E. & B. R.	876,000	7	May, 1874				
Lake Superior & Mississippi—							
1st mortgage land grant	4,500,000	7 g.	Jan., 1874				